



INTERNATIONAL CONFERENCE ON SCIENCE TECHNOLOGY ENGINEERING & MATHS FOR SUSTAINABLE DEVELOPMENT

(ICSTEMSD 2024 – 2nd Edition)

Theme: Fifth Industrial Revolution

DATE: 15th-16th FEBRUARY, 2024

VENUE: ATHARVA COLLEGE OF ENGINEERING

CONFERENCE PROCEEDINGS

ORGANIZED BY



AET'S

ATHARVA COLLEGE OF ENGINEERING MUMBAI

ATHARVA EDUCATIONAL COMPLEX, MALAD MARVE ROAD, CHARKOP NAKA, MALAD (WEST),

MUMBAI-95 TEL.: 91-022-40294949

www.icstemsd.in

www.atharvacoe.ac.in

This is the proceeding of a conference entitled International Conference on Science, Technology, Engineering & Mathematics for Sustainable Development (ICSTEMSD 2024), which was sponsored by Atharva College of Engineering, Malad, Mumbai, and held on 15th - 16th of February 2024.

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Instruction to authors:

For a paper to be considered for publication it is a pre-condition that it is not submitted for publication elsewhere, contains results that are new and significant, and of interest to a wide section of the engineering and science community. Editors may invite papers on special topics of current interest.



ABOUT THE COLLEGE

An ever-increasing demand for Technical Education in Maharashtra as a whole and in Mumbai in particular, has created fierce competition. As a result, many meritorious students are deprived of the opportunity of taking engineering education. A large number of students are required to migrate from Mumbai to some other University. This results not only in extra expenditure for the parents but also leads to depression amongst the students. After careful observations, through Survey of different institutions 'The Atharva Educational Trust' has decided to come forward for the noble cause of technical Education and open the new technical institution which will impart technical education in High – Tech areas like Computers, Information Technology and Electronics & Telecommunication, Electronics Engineering.

'The Atharva Educational Trust' believes in producing well-disciplined, practical-oriented, highly knowledgeable Engineers to serve not only themselves but the society and the nation. To make this dream come true the Trust has developed the infrastructure first and proved its merit in getting recognition from Govt, of Maharashtra & A.I.C.T.E. New Delhi, the body for promoting technical education of high quality in India established by Govt, of India.

The Atharva Educational Trust owns a spacious campus in Malad, where an ideal educational 'Atharva College of Engineering' campus has grown in leaps and bounds in a short span of time. The Institute started functioning in the academic year 1999-2000 & has achieved good results at the University of Mumbai since then. The institution has developed laboratories with sophisticated equipment. Learned, disciplined, and qualified staff is going to be another attraction for the students in this institution.

- Atharva was established in the year 1999 for the noble cause of Engineering education in western suburbs.
- Presently caters to the needs of 800+ students in various branches.
- ISO 9001:2015, 21001:2018, 14001:2015 Certified Institute.
- ISO approved by American Quality Assessors (India) Private Limited & Accredited By ANAB.

AET's Educational Complex is set up on a gigantic and spacious campus of 6 acres situated in the heart of Western suburbs at Malad with convenient access by bus/train. With classic architecture & interiors, beautiful green landscaping and ambiance, state-of-the art infrastructure, and other sophisticated equipment, AET Complex is the perfect setting for a professional environment with a friendly touch to the scene.



ATHARVA EDUCATIONAL TRUST'S



ATHARVA COLLEGE OF ENGINEERING



ISO 9001: 2015,
21001:2018,
14001:2015

*Approved by AICTE, DTE & Affiliated to the University of Mumbai
NAAC re-accredited 'A+' Grade*

Excellence In Education.....



Hon. Shri Sunil Rane

(Executive President, AGI)

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Director

Dr. R K. Kulkarni

Principal

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ATHARVA
COLLEGE OF ENGINEERING



Message from Executive President Atharva Group of Institutes



Mr. Sunil Rane
Patron

ATHARVA Group of Institutes cherishes as a leading “Centre of Excellence” in Engineering, Management, Film Studies and Hotel Management through Research, Technology and Innovation. Technology can become the wings that will allow the educational world to fly farther and faster than ever before. Atharva College of Engineering aims to constantly strive and provide comprehensive technological education in a healthy learning environment, nurturing technocrat leaders for the competitive world.

We organise national and international conferences to excel in the latest technologies, keeping this in the mind, Atharva College is organising an International Conference on Science Technology Engineering and Mathematics for Sustainable Development (ICSTEMSD-2024) will be held at Atharva College of Engineering, Malad, Mumbai on 15-16 February 2024. The Conference aims to facilitate close interaction for exchange of views & dissemination of knowledge and collaborate STEM with sustainable development. Moreover, the conference will be an aperture for research and implementation of sustainable STEM based cutting edge theories, opening new vistas for technology and entrepreneurship. This conference would provide a platform to come face to face with pioneers in the field leading to promotion and facilitation of recent development and discover more pathways for methodological and technological exploration.

I welcome all the technocrats, researchers, academicians and congratulate them for their valuable contribution in research and technology. I also congratulate the organizing committee and extend my best wishes for the success of the conference.

Mr. Sunil Rane
Executive President
Atharva Group of Institutes
Malad, Mumbai



Message from Director's Desk



Dr. P. N. Nemade
Conference Chair

It gives me great pleasure to invite you all to the 2nd Edition of the International Conference on Science Technology Engineering & Mathematics for Sustainable Development (ICSTEMSD 2024) being organized from 15th-16th Feb 2024 at Atharva College of Engineering (ACE), Malad, Mumbai.

The ACE Campus conceals a rich knowledge, innovation, and technology reservoir. The conference activities aim to engage researchers, practitioners, professionals, educators, and students in exchanging their experiences, creative concepts, challenges, current developments, and prospects in Engineering, Science, and Technology.

This conference will provide a unique opportunity for the exchange of innovative ideas and technical expertise for technological advancements. It includes academic keynote speeches and research scholar's presentations through papers and posters. We are pleased to extend a warm welcome to all participants of this conference.

This conference will provide many opportunities to meet and interact with diverse people. I am very grateful to the Conference Committee members, students, and all our colleagues for their preparation and hard work to ensure a stimulating and pleasurable experience for everyone. I extend my best wishes for a highly successful ICSTEMSD 2024.

Dr. P. N. Nemade
Director
Atharva College of Engineering
Malad, Mumbai

Message from Principal's Desk



Dr. Ramesh Kulkarni

I, Dr. Ramesh Kulkarni extend an invitation to all of you to participate in the "International Conference on Science, Technology, Engineering & Mathematics for Sustainable Development (ICSTEMSD 2024)" as the conference chair. The conference is to bring together global researchers, scientists, and industrialists to exchange concerns about developments and difficulties in the field of digital transformation.

I extend a warm greeting to all of the conference delegates on behalf of the entire ICSTEMSD 2024 team. I am grateful for the collaboration and support shown by all authors, sponsors, and keynote speakers. Sustainable development in science, technology, and mathematics is the conference focus. Rapid technological advancement is altering our way of life and assisting in the resolution of numerous societal problems. We are lucky to have knowledgeable presenters who will share their insights and offer solutions to the issues.

I'm optimistic that employing STEM to achieve the desired sustainable development will stabilize the world's social, economic, and environmental needs. My sincere appreciation goes out to the organizing group for their diligent work in making the conference a reality. I'm hoping that every participant will have a positive and productive experience. And in particular, I hope that women scholars will participate to the fullest extent possible, as this is the government of India's goal, which will ultimately help empower women.

In closing, I would like to thank the conference organizers, college teachers, student reps, and attendees for their hard work in planning and executing this event. I also wish the conference continued success.

A handwritten signature in black ink, appearing to read 'Dr. Ramesh Kulkarni', written over a light blue rectangular background.

Dr. Ramesh Kulkarni
Principal
Atharva College of Engineering
Malad, Mumbai



Dr. B. E. Narkhede

It is my privilege to welcome you to the International Conference on Science, Technology, Engineering, and Mathematics (STEM) for Sustainable Development. I am honored to witness the convergence of brilliant minds from around the corner to explore innovative solutions for a sustainable future.

This conference serves as a platform to bridge the gap between research, industry, and policy, fostering collaborative efforts that transcend traditional boundaries. The collective expertise gathered here promises to catalyze transformative advancements in STEM, addressing the pressing challenges that define our era.

May the knowledge shared within these proceedings inspire and guide our collective journey towards sustainable development. I extend my gratitude to all organizers, and participants for their dedication to advancing the frontiers of STEM for a brighter and more sustainable tomorrow.

Wishing you a fruitful and enriching conference experience.

A I N A I

Dr. B. E. Narkhede
Associate Professor,
NITIE, Mumbai



Dr. Yashwant. V. Joshi

I congratulate you and your team for organizing the conference "International Conference on Science Technology Engineering & Maths for Sustainable Development" at Atharva College of Engineering on 15th and 16th February. This conference will deliberate the current issues and technological developments in STEM.

I wish you and the team all the best.



Dr. Yashwant. V. JOSHI
Professor,
Ex-Director, SGGs, NANDED



Dr T. S. Rathore

Dear Members of the ICSTEMSD Organizing Committee,

It gives me immense pleasure to express my feelings for the International Conference on International Conference on Science Technology Engineering & Maths for Sustainable Development on the theme 'Fifth Industrial Revolution' to be organized by Atharva College of Engineering, Malad on February 15-16, 2024.

Atharva College is one of the prominent engineering colleges in Mumbai with a vision to excel in technical education. Keeping in mind the fast-changing scenario of technological developments at the global level, it is providing state-of-the-art infrastructure, the right academic ambiance, and a conducive environment for developing professional skills coupled with managerial growth, and entrepreneurial and leadership skills to students which will make them competent professionals to face globally.

Atharva College maintains stringent quality standards in all aspects of teaching-learning activities and the overall development of the students and staff.

Like Season-1, ICSTEMSD, this time also, I am sure you must have received a stupendous response from all corners of India and abroad due to the continuous efforts, extensive work, and commitment and dedication of the organizing committee members and reviewers.

I am sure that Atharva College will provide the best ambiance, finest hospitality, and state-of-the-art infrastructure of international standards during the conference.

I extend my best wishes for the success of ICSTEMSD 2024. I congratulate all the members of the organizing committee for taking untiring effort in organizing the conference, specially, Hon. Shri Sunil Rane (Executive president, Atharva Group of Institutes); Dr P N Nemade, Director; Dr. Ramesh Kulkarni, Principal; Ms Ritu Sharma (HOD Humanities and Applied Science Department), Chair; Dr Kavita Bani (HOD of ECS Department) and Mrs Kshipra Pandey (Electrical Department), Co-chairs.

Dr T. S. Rathore
Professor, School of Electrical Science,
IIT, GOA

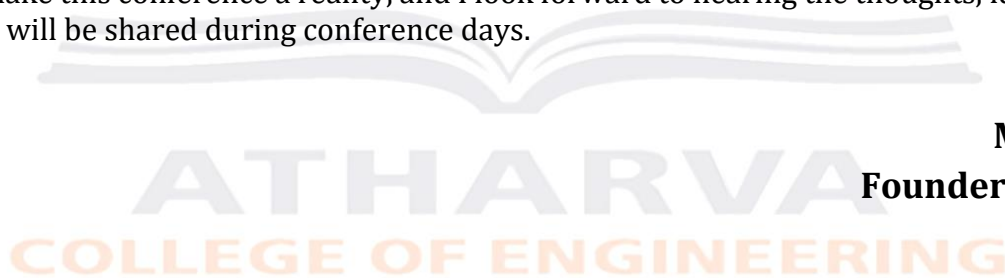


Mr. Amit Padhy

As an advisor for this international conference on Science, Technology, Engineering, and mathematics for sustainable development, I would like to express my deep gratitude for the opportunity to be a part of such a meaningful and important event. It is an honor to be in the company of many experts and leaders who are committed to positively impacting our planet.

Sustainable development is a critical issue that affects us all. The collective knowledge and expertise of those gathered here will play a vital role in shaping the future for generations to come. The discussions and presentations on conference days will cover a wide range of topics and will provide valuable insights and inspiration for all of us to take back to our respective communities.

As an advisor, I am honored to be a part of the organizing committee, which has put in great effort to make this conference a reality, and I look forward to hearing the thoughts, ideas, and solutions that will be shared during conference days.



Mr. Amit Padhy
Founder, AVP Robotics
Mumbai

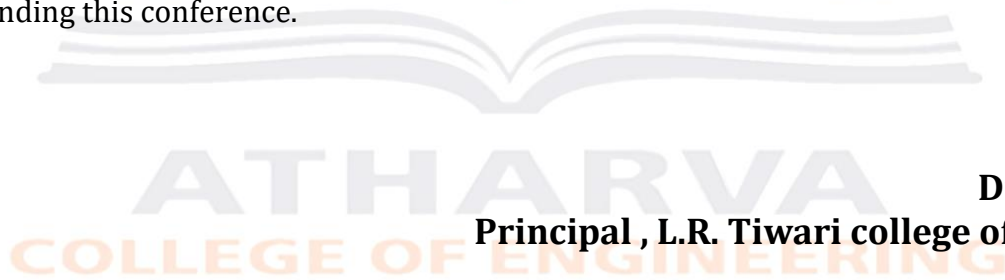


Dr. Deven Shah

The conference offers a platform for scholars, instructors, engineers, and students from across the nation and globe to share their perspectives, investigate enabling technologies, and deliberate on inventive approaches for technological progress. The delegates have contributed in an overwhelmingly positive way.

Furthermore, it is my aim that this conference will inspire all attendees to generate novel ideas in a variety of sectors that will greatly advance humankind. Modern technology is one of the fundamental tools of development. Creativity leads to innovation, which is essential to the evolution of technology since it minimizes input requirements and produces multiple, desired, and adaptable outputs.

Lastly, I would like to thank the staff and all attendees for their hard work in planning and attending this conference.



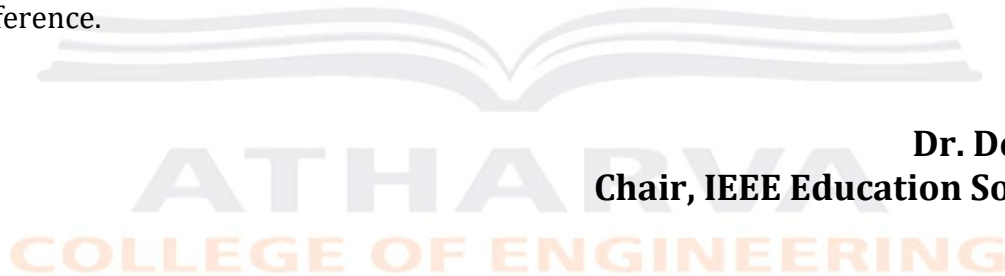
Dr. Deven Shah
Principal , L.R. Tiwari college of Engineering,
Mumbai



Dr. Deepak Waikar

Sustainable development can be accelerated using Science, Technology, Engineering, and Mathematics (STEM) education locally and globally. The term ART can be appropriately infused in STEM to make it STEAM (Science, Technology, Engineering, Art, and Mathematics) Education. It also enhances the holistic aspects of education. The creativity and innovation can also be strengthened using the fifth dimension, ART. The complex topics of the Global Climate Crisis which continues to affect every sphere of life on this planet can be articulated using STEAM education. New and renewable energy, and clean technologies using automation, robotics, analytics, artificial intelligence, AR/VR/MR, Digital Twins, IoT, smart sensors, and smart devices have a critical role in sustainable development. In that context, the International Conference on Science Technology Engineering & Maths for Sustainable Development (ICSTEMSD 2024) organized by Atharva College of Engineering, Malad, Mumbai, India is very timely.

Hearty congratulations to the Organising team of ICSTEMSD 2024 and best wishes for the conference.



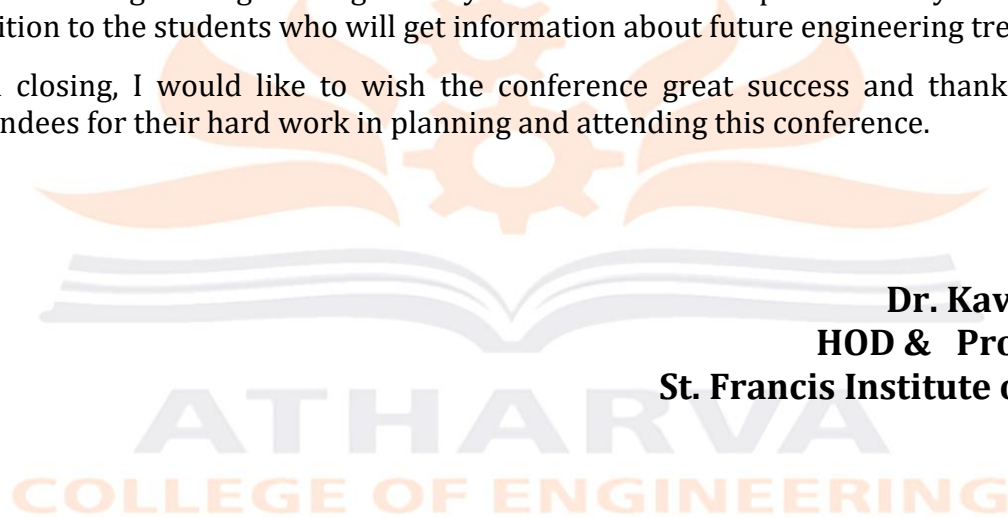
Dr. Deepak Waikar
Chair, IEEE Education Society Chapter
Singapore



Dr. Kavita Sonawane

The International Conference on Innovative and Advanced Technologies in Engineering functions as a platform for discussion of engineering-related as well as science- and technology-related technical subjects. It is fantastic to hear that the "International Conference on Science, Technology, Engineering, and Mathematics for Sustainable Development" will be held at the Atharva College of Engineering. Faculty members will be inspired to study and exchange ideas, in addition to the students who will get information about future engineering trends.

In closing, I would like to wish the conference great success and thank the team and all attendees for their hard work in planning and attending this conference.



Dr. Kavita Sonawane
HOD & Professor, CMPN
St. Francis Institute of Technology
Mumbai



Mr. Sharang Ambedkar

It gives me immense pleasure to invite you all to the International Conference on Science, Technology, Engineering & Mathematics for Sustainable Development (ICSTEMSD 2024), an International Conference that promises to be a pivotal event.

As the Managing Director of FeelGood EcoNurture LLP, I am thrilled about the prospect of this global gathering, bringing together visionaries, industry leaders, and experts from various fields. The International Conference on Science, Technology, Engineering & Mathematics for Sustainable Development (ICSTEMSD 2024) is scheduled to take place on the 15th and 16th of February 2024 at Atharva College of Engineering.

This conference serves as an invaluable platform for exchanging knowledge, ideas, and experiences, with a specific focus on Science, Technology, Engineering & Mathematics for Sustainable Development. Your insights and expertise would significantly contribute to the depth and diversity of discussions.

Your presence at ICSTEMSD 2024 would enhance the event's prestige and provide a unique opportunity to showcase the contribution to the advancements in Science, Technology, Engineering, and mathematics for Sustainable Development. We eagerly anticipate the honor of your participation and the prospect of collectively shaping the future at ICSTEMSD 2024.

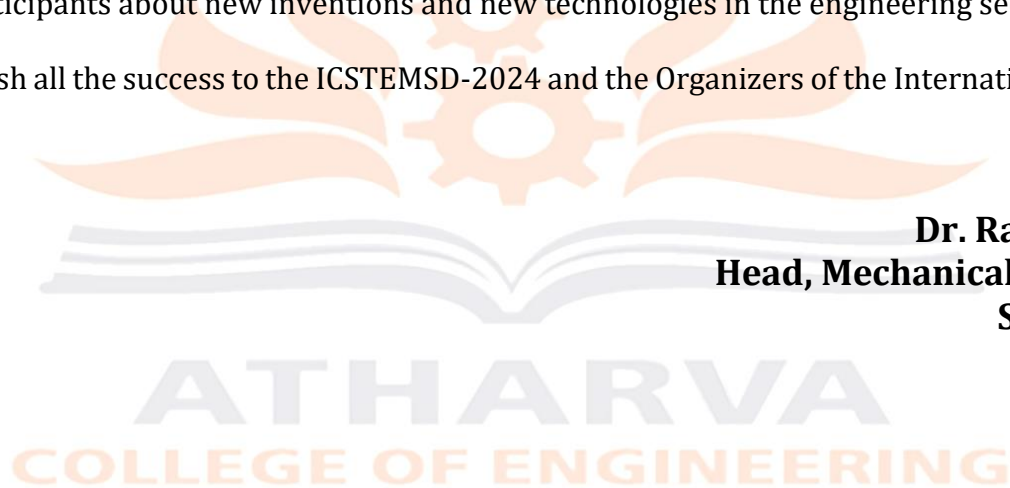
Mr. Sharang Ambedkar
Managing Director
FeelGood EcoNurture LLP
Mumbai



Dr. Rajesh Bhutkar

I am happy to learn that Atharva College of Engineering, Mumbai has organized this conference ICSTEMSD-2024. Today technology is developing at a very fast pace. We experience new developments every day and every moment. Technology is changing and new areas of research are coming up. I hope that this conference will certainly induce innovative ideas among the participants about new inventions and new technologies in the engineering sector.

I wish all the success to the ICSTEMSD-2024 and the Organizers of the International Conference.



Dr. Rajesh Bhutkar
Head, Mechanical Engineering,
SPEC, Mumbai



Dr. Sidharth Joshi

As we converge for this distinguished international conference ICSTEMSD 2024, let us collectively embrace the transformative power of collaboration and innovation to achieve the sustainable goal for Mother Earth. Our diverse perspectives converge into a rich tapestry of knowledge, transcending borders and forging connections that will shape the future. Let the discussions among all of us be a catalyst for their actionable insights, fostering a global community committed to addressing shared challenges and new shifts in the world.

May this gathering be a crucible for ideas, where creativity flourishes, and solutions crystallize. Let us recognize the profound impact our collective intelligence can have on shaping a more sustainable, inclusive, and equitable world. Embrace the opportunity to network and learn, as these interactions will echo beyond the conference, creating enduring partnerships. The partners lead to accept the challenge to converge the world towards sustainability.

In the spirit of unity, let our deliberations echo with the voices of inclusivity, diversity, and mutual understanding. Together, let us chart a course toward a future defined by shared prosperity, progress, and global solidarity. The bonds forged here endure, amplifying the resonance of our shared commitment to a brighter and more harmonious tomorrow. At last one quote, **alone we can do so little; together we can do so much** unquote.

COLLEGE OF ENGINEERING

Dr. Siddharth Joshi
Assistant Professor
PDEU University, Gujrat



Dr. Manjul Tripathi

The conference provides a forum for global experts to discuss novel approaches to science and technology within a dynamic environment. The modern technology is developing at a very quick pace. We experience fresh developments every day and every second. The conclusions of this meeting, we hope, will greatly expand our knowledge of these frontier scientific areas. The globe is changing due to new and inventive technology in today's extremely dynamic environment.

I congratulate the Institute for this fantastic move and extend my best wishes to the conference organizers.



Dr. Manjul Tripathi
Research Associate
IIT, Delhi



Dr. Ritu Sharma

Welcome to the International Conference on Science Technology Engineering & Maths for Sustainable Development 2024.

Your participation is important in fostering collaborations and innovations. Join us for impactful discussions, knowledge exchange, and networking opportunities. Together, let's explore how STEM fields can drive sustainable solutions for a better future.

The conference promises enriching insights from renowned speakers and diverse perspectives. Prepare to engage, learn, and contribute to the collective pursuit of sustainable development through the lens of science, technology, engineering, and mathematics.

We look forward to your valuable presence and contributions. See you at the forefront of sustainable progress.

ATHARVA
COLLEGE OF ENGINEERING

Dr. Ritu Sharma
HOD (Humanities & Applied Sciences)
Atharva College of Engineering
Malad, Mumbai



Dr. Kavita Bani

It gives me great pleasure to extend a warm greeting to everyone attending the 2024 International Conference on Science, Technology, Engineering, and Math for Sustainable Development (ICSTEMSD-2024) at Mumbai's Atharva College of Engineering. The accumulation and advancement of human knowledge is always justified by the wonders of the human mind. Every person will gain a great deal from the ICSTEMSD-2024 in releasing this amount of scientific information. I humbly hope that the friendships and partnerships formed will endure and flourish for many years to come, as well as that the professional discourse among researchers, scientists, engineers, students, and educators continues beyond the event.



A handwritten signature in blue ink that reads 'Kavita'.

Dr. Kavita Bani
HOD, Assistant Professor
Electronics & Computer Science Department
Atharva College of Engineering
Malad, Mumbai



Mrs. Kshipra Pandey

The celebration of the International Conference on Science, Technology, Engineering, and Maths for Sustainable Development (ICSTEMSD-2024) at Mumbai's Atharva College of Engineering is promising as it brings together professionals from a variety of educational sectors. If academics from academia and business can come together for the symposium and students are allowed to attend, it is even more encouraging. On the one side, we have the academic community interacting closely with students, who will in the near future become highly skilled professionals working in technical organizations in India or elsewhere. Conversely, researchers in the industry can showcase their most recent developments in turning research into viable goods. We are fortunate to be a part of this technological revolution.

This is a great opportunity for networking with new industry participants and working together. Academicians are able to collaborate not just with other academic groups but also with businesses and companies in addition to sharing their knowledge with their colleagues. Pre-graduate and graduate students alike have the chance to interact closely with the world of the future at the same time. Such an occurrence aids in better determining their course for the future.

We should view the ICSTEMSD-2024 conference as a fantastic chance to discuss our latest research findings, foster collaborations between academic and industry researchers, assess the state of technology, and, ultimately, inspire our younger generation to outperform us in this area. I hope you have the best possible time.

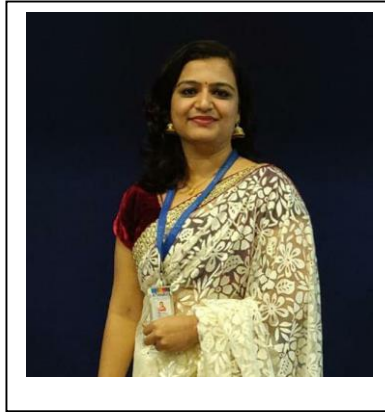
A handwritten signature in black ink, appearing to read 'Kshipra Pandey', written on a light blue background.

Mrs. Kshipra Pandey
Assistant Professor
Atharva College of Engineering
Malad, Mumbai

Steering Committee



Ms Pragma Jain
VP Academic



Dr. Jyoti Mali
VP Admin & HR



Dr. Bhavin Shah
HOD (EXTC Dept.)



Dr Bhushan Sonawane
Assistant Professor
(HAS Dept.)



Dr Suvarna Pansambal
HOD
(CMPN Dept.)



Ms Sangeeta Kutecha
HOD
(ELEC Dept.)



Dr Ulhaskumar M. Gokhale
HOD
(INFT Dept.)

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Assistant Professor
(ELEC Dept.)



Ms. Anuja Gaikwad
Assistant Professor
(CMPN Dept.)



Ms. Snehal Kangane
Assistant Professor
(INFT Dept.)



Dr. Abhilasha Saini
Assistant Professor
(HAS Dept.)



Ms. Deepa Gala
Assistant Professor
(HAS Dept.)



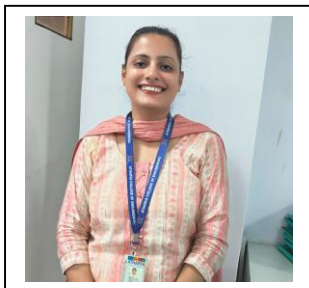
Ms. Natasha Naik
Assistant Professor
(ECS Dept.)



Ms. Ashwini Kachare
Assistant Professor
(CMPN Dept.)



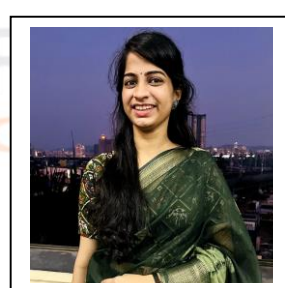
Dr. Priyanka Badani
Assistant Professor
(HAS Dept.)



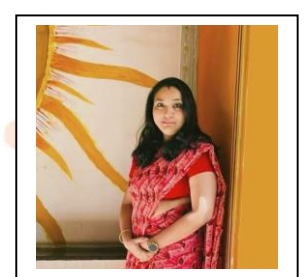
Ms. Shikha Malik
Assistant Professor
(EXTC Dept.)



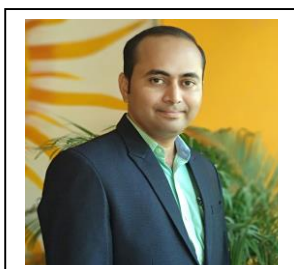
Ms. Sakthibala D.
Assistant Professor
(ELEC Dept.)



Ms. Aparna Shukla
Assistant Professor
(HAS Dept.)



Ms. Dhanashree Salvi
Assistant Professor
(INFT Dept.)



Mr. Sandip Zade
Assistant Professor
(EXTC Dept.)

International Conference on Science Technology Engineering & Maths for Sustainable Development

ICSTEMSD-2024

Conference Theme

The Sustainable Development and Fifth Industrial Revolution Conference brought together experts, innovators, and policymakers to explore the intersection of environmental stewardship and technological advancement. Attendees delved into discussions on harnessing the power of the fifth industrial revolution to drive sustainable practices, emphasizing the role of emerging technologies in addressing global challenges. Topics ranged from renewable energy integration and smart cities to circular economy models and ethical AI. The conference served as a platform for cross-sector collaboration, fostering a shared commitment to shaping a future where economic progress aligns harmoniously with ecological responsibility. Participants will get inspired, and armed with insights and strategies to propel sustainable development within the dynamic landscape of the fifth industrial revolution.

Tracks (but not limited to)

Track 1: Advancement in Electronics, Telecommunication and Networks.

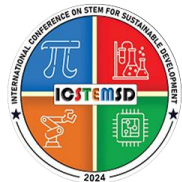
Track 2: Applied Computing and Data Sciences.

Track 3: Recent Trends in IT.

Track 4: Technology trends in Electrical Engineering.

Track 5: Embedded Systems and IOT.

Track 6: E-Learning and Applied Science.

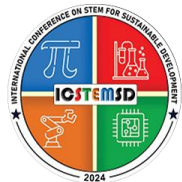


International Conference on Science Technology Engineering & Maths for Sustainable Development (ICSTEMSD- 2024) 15th to 16th February, 2024



SCHEDULE 15th & 16th February-2024

DAY-1 15.02.2024 (THURSDAY)		
TIME	SCHEDULE	VENUE
08:30 AM onwards	REGISTRATION	Phase-I Ground Floor
08:30 AM -9:30 AM	<i>Breakfast</i>	Phase- III Ground Floor
INAUGURATION		
09:30 AM - 09:35 AM	Welcome & Lighting of Lamp	Phase-III 4 th Floor Seminar Hall
09:35 AM - 09:40 AM	Welcome Address Dr. P. N. Nemade Director, ACE	
09:40 AM - 09:45 AM	Opening Remark by: Dr.Ritu Sharma Conference Organizing Chair- Associate Professor, HAS	
09:45 AM - 09:55 AM	Address by Patron Hon. Shri Sunil Rane Sir Executive President, Atharva Group of Institutes	
09:55 AM - 10:40 AM	Address by Dr. Prashant Prakash Angarakh Scientist, ISRO Hyderabad	
10:40 AM - 11:05 AM	Address by Dr. Y. Rama Mohan Rao Editor, IJTE UGC Journal	
11:05 AM - 11:50 AM	Address by Dr. Roy Kshemendra Communication & Business Head, Tata AIA Life Insurance	
11:50 AM - 11:58 AM	Address by Principal,ACE Dr. Ramesh Kulkarni	
11:58 AM - 12:00 PM	Vote of Thanks Dr. Kavita Bani	

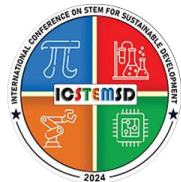


International Conference on Science Technology Engineering & Maths for Sustainable Development (ICSTEMSD- 2024) 15th to 16th February, 2024



12:00 PM - 12:10 PM	<i>Tea Break</i>	Phase-III Fourth Floor
12:10 PM - 1:00 PM	Inauguration of Poster Presentation by Chief Guest	Phase-I 2nd Floor Library
01:00 PM - 02:00 PM	<i>Lunch</i>	Phase-III Ground Floor
02:00 PM - 03:30 PM	Parallel Session of Paper/Poster Presentation	Phase-I
03:30 PM - 03:40 PM	<i>Tea Break</i>	Phase-III Fourth Floor
03:40 PM - 05:00 PM	Parallel Session of Paper/Poster Presentation	Phase-I

DAY-2 16.02.2024 (FRIDAY)		
TIME	SCHEDULE	VENUE
8:30 AM onwards	<i>Breakfast</i>	Phase- III Ground Floor
9:00 AM - 11:30 AM	Parallel Session of Paper Presentation	Phase-I
11:30 AM - 12:30 PM	Session 1 Keynote Speaker Dr. Rajesh Vasta Senior Research Scientist, BARC, Mumbai	Phase-I 5 th Floor Smart classroom II
12:30 PM - 1:30 PM	<i>Lunch</i>	Phase-III Ground Floor
1:30 PM - 2:15 PM	Session 2 Keynote Speaker Dr. Navinchandra Gopal Shimpi Professor, University of Mumbai, SantaCruz	Phase-I 5 th Floor Smart classroom II



International Conference on Science Technology Engineering & Maths for Sustainable Development (ICSTEMSD- 2024) 15th to 16th February, 2024



VALEDICTORY		
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2:20 PM – 2:50 PM	Report of Rapporteur Dr. Ulhaskumar Gokhale	
2:50 PM – 3:00 PM	Views of Participants	
3:00 PM – 3:15 PM	Concluding Remarks Dr. Ramesh Kulkarni Principal, ACE	
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Abstracts

Sr.No.	Paper ID	Title
1	1	Shruti Jha, Nagendran Shetty, Neel Shinde, Kavita Bani <i>My Eyes- Smart Glasses for Blind People.</i>
<p>Abstract — My eyes are smart wearables designed to assist individuals with visual impairments. These innovative wearable devices combine advanced technologies such as computer vision, sensors, and audio feedback to enhance the daily lives of the blind. By capturing and processing real-time visual information from the surroundings, these smart glasses offer navigation support, object recognition, and obstacle detection. This abstract explores the key features, benefits, and challenges associated with the development and adoption of smart glasses for the blind, highlighting their potential to significantly improve independence and accessibility for visually impaired individuals.</p>		
Sr.No.	Paper ID	Title
2	2	Swati Shinde, Ramlakhan Sah, Renuka Kshirsagar, Sneha Namdev <i>Development of a Smart Irrigation System with Soil Erosion Detection</i>
<p>Abstract — India is an agricultural country and agriculture is an important aspect of the Indian economy. To increase agricultural productivity, technology can be used in the process of irrigation. The use of technology can greatly reduce water waste while supplying the required volume of water and also help in more crop productivity to meet the commercial demand. Also, Soil Erosion is a serious concern that negatively affects agricultural production and raises water resource utilization issues. In any soil management system, controlling the sediment is important to improve water quality and soil quality. Our main purpose is to develop a smart irrigation system along with a soil erosion detector that can control the irrigation process and also help us to determine the amount the soil that is being eroded. By integrating soil erosion monitoring and irrigation management, our IoT—powered solution optimizes agricultural practices. It offers real time monitoring of erosion levels, facilitates data—driven decision—making for irrigation, and enhances sustainability. This project enables an automated and efficient irrigation process which leads to an increase in crop productivity, thereby increasing supply and helping to bridge the demand—supply gap. Secondly, this proposed work provides real—time access to the data from the farm to the farmer from the sensors deployed across the farm, thereby helping them to make data—driven decisions. This system also enables proper water—resource management and thus reduces the wastage of water.</p>		
Sr.No.	Paper ID	Title
3	4	Prof. Sandhya Deshpande, Ms. Supriya Suresh Nakade, Mr. Aniket Amit Velankar, Mr. Nikunj Ashok Panchal. <i>Enhancing agricultural productivity through NDVI precision farming for sustainable crop management</i>
<p>Abstract — The analysis of Land Use and Land Cover (LULC) plays a crucial role in understanding the evolving landscape and environmental dynamics of a region. Given that land</p>		

is a finite resource, it is imperative to optimize its utilization. This study seeks to employ Remote Sensing and Geographical Information System (GIS) technology to generate comprehensive land use land cover information for the strategic planning and formulation of land use policies in the newly emerging problem area of Junnar City in Pune district, Maharashtra, India. With Junnar City spanning approximately 2,600 square kilometers or 260,000 hectares, this research aims to support sustainable land use practices and mitigate potential conflicts, recognizing the significance of land as a pivotal natural resource essential for agricultural sustainability. The nation must prioritize responsible land management to secure a resilient agricultural sector and prevent adverse land use conflicts.

Sr.No.	Paper ID	Title
4	5	Aaliya Solkar, Aksa Rajwadkar. Arsiya Hodekar, Sukanya Parab, Dr. Sharada V. Chougule <i>Review of AI Based Medical Assistant</i>

Abstract —With the introduction of artificial intelligence (AI) into different parts of patient care, the healthcare industry is witnessing a significant transition. AI-powered medical assistants, in particular, are being used to improve patient data recording, making it more efficient and accurate. The purpose of this survey article is to investigate the state of current research in efficient patient data recording using medical assistant AI. In this expanding sector, this paper covers the key technologies, applications, problems, and future opportunities. This study highlights the relevance of complex technologies in attaining efficiency, such as edge computing, low-power hardware, energy-efficient algorithms, and sensor integration. It also delves into remote patient monitoring, wearables, electronic health records, and telemedicine applications. While the industry has a lot of potential, it confronts a number of challenges in terms of data security, compliance, integration, and ethics. With continued AI developments, standardization, and increasing patient empowerment on the horizon, the future of power efficient patient data collection employing medical assistant AI is optimistic, promising to alter patient care and healthcare provider operations.

Sr.No.	Paper ID	Title
5	8	Roshan G. Belsare, Dr. P. B. Ambhore <i>Enhancing Service Quality in Fog Computing through Blockchain Integration: Investigating Methods, Addressing Challenges, and Assessing Performance</i>

Abstract — In today's computing landscape, fog computing has emerged as a transformative paradigm, facilitating real-time data processing at the network edge to minimize latency and enhance responsiveness. However, ensuring optimal Quality of Service (QoS) in fog environments, while safeguarding data integrity, presents a challenge. This research addresses this critical concern by introducing a comprehensive framework that systematically improves QoS through the thorough integration of blockchain technology. Probing into the association of fog computing and blockchain, this study discovers sophisticated strategies that target the reduction of latency, the amplification of scalability, and the precision management of resources. Through complex process of implementation and systematic evaluation, our proposed strategies manifest demonstrable enhancements across key QoS metrics, prominently

including latency and throughput. These enhancements are substantiated through the inclusion of practical case studies that underscore the tangible benefits of our approach in a diverse range of scenarios. This research advances the understanding of the synergistic potential of fog computing and blockchain, while simultaneously empowering practitioners with actionable insights to couple these technologies harmoniously. By combining these innovations, both enhanced QoS and fortified data processing at the network edge become attainable objectives, furthering the evolution of modern computing paradigms.

Sr.No.	Paper ID	Title
6	11	Prof. Ashwini Rajendra Kachare <i>Natural Language Processing and Its Challenges</i>

Abstract — Natural language processing (NLP) just expanded much kindness aimed at expressive as well as analysing human linguistics computationally. That one takes its applications in numerous pitches for Example machine transformation, email unsolicited mail exposure, information mining, summarization, health sector, and question answering. In this paper, we List out the Application of NLP then deliberate in feature the state of the art giving the numerous claims of NLP, existing drifts, as well as tasks.

Sr.No.	Paper ID	Title
7	13	Dr. Jyoti Jayesh Chavhan <i>Optimizer Effects On Language Models For Hate Speech Detection In Dravidian Text</i>

Abstract — Detecting and documenting instances of abusive behavior can help to improve the overall quality of the virtual environment. Because of the vast amount of content published on social media networks on a daily basis, human annotators find it impossible to manually pick potentially hazardous content. In recent years, Algorithmic initiatives to solve the problem of abuse detection, especially on Twitter, have come a long way. For Dravidian Text the results there is still needed to understand the context and build language models to classify in higher extent. So, we have used different optimizers with XLM-Roberta language model to train our model and created a state-of-art result. This outstanding result can be credited to the comprehensive implementation of these efforts. The proposed technique of incorporating the best optimizers and activation functions into pre-existing language models improves overall accuracy by 19% across many domains. This enhancement is due to the proposed method's inclusion of previously existing language models. We have achieved a 74.13% of accuracy for Kannada Language, 96.25% for Malayalam language and 79.72% accuracy for Tamil Language using different set of optimizers.

Sr.No.	Paper ID	Title
8	14	Dr. Abhilasha Saini, Dr. P.N. Nemade, Dr. Priyanka Badani, Prof. Dipa Patel <i>Superconductivity; Mechanism, Applications & Future Prospects</i>

Abstract — Superconductivity; a physical occurrence in the scientific concerns which

eventuates lower than a specific thermal condition, entitled as critical temperature(T_c). The non-appearance of an intramural magnetic domain as well as indefinitely elevated electrical conductivity, are the acclaimed attributes of superconducting substances. This physical event is now crucial in many fact finding exploring fields. The paper emphasizes on the theoretical aspects, practical implementations and the newfangled applicability of superconductors.

Sr.No.	Paper ID	Title
9	15	Saakshi Pawar, Laxmi Jaiswal, Snehal Nanawar, Kumudini Patil, Prof. Kirti Mhamunkar <i>Portfolio Website</i>

Abstract — You desire a website that serves as a portfolio for your work. It matters not how big or small the group—two or ten—but having a distinct online presence is crucial. A web portfolio can help you differentiate yourself from the competition, demonstrate your unity, build rapport, establish specifications, and ensure that people can truly locate you. A website portfolio is more significant in some contexts than others. However, if you find yourself in any of the following situations, it's safe to presume that you need a portfolio in the same way that a book needs words. If you have a website, visitors can always locate you and get in touch with you if they're interested. In the event that you are not online. For shutterbugs, contrivers, inventors, and a variety of other artists, a portfolio is an excellent internet presentation tool for their work. It enables you to showcase your individuality with your artwork, including prints, sketches, and graphic design.

Sr.No.	Paper ID	Title
10	17	Abhishek Patange, Jyoti Joshi, Sahil Mhatre, Soham Mhatre, Prof. Kirti Mhamunkar <i>E-Learning Platform</i>

Abstract — The "E-Learning Platform" project is a web application-based system that is useful for students. This system is primarily responsible for managing users, online courses. The application is a web-based teaching system designed and developed by understanding the student's interests and needs to provide them the better experience of overall learning. Students will save time by using this app and will be able to easily get all study materials from teachers. Thus, they will be able to continue their education. Teachers can use this platform to share project-related resources, including code and information materials. Students can ask academic questions to their teachers using this application. Using this application, teachers can upload documents, lectures, publish content such as images, pdf, or documents for students to learn. Teachers can create and accept any assignment using this app. With the help of features provided to analyze students and the courses, teachers can see how many students are attending the lesson. The more is the reach to the platform more it will be beneficial for both students and Teachers.

Sr.No.	Paper ID	Title
11	21	Dr. Vivek Ramakrishnan, Dr. Bhavin C. Shah, Prof. Ankit Deogharkar, Prof. Mohan Kumar

		<i>Game Theory and Artificial Intelligence</i>
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Abstract — Game Theory and Artificial Intelligence are two mature areas of research, originating from similar roots, which have taken different research directions in the last 50 years. However, recent studies demonstrate the close ties between these fields, indicating that it was time to close the divide between these research specialties. In this paper, we focus on fundamental problems in representation, reasoning, and learning, and we address research on these topics that straddle the boundaries of game theory and artificial intelligence.

Sr.No.	Paper ID	Title
12	24	Dr. Shikha Gupta, Armaan Moledina, Soham Athavale, Aditya Birje, Shravan Barkul <i>EmpowerU: A Women's Safety and Empowerment App</i>

Abstract — Crime against women has been on the rise, especially in developing countries such as India. The changing social constructs of our society mean that women are now integral to the workforce, just as men are. The increase in female education has directly contributed to the rise in women's employment. Despite these positive trends, there are still many individuals across India who lack access to education or employment opportunities due to a combination of insufficient facilities and conservative family values. Additionally, concerns about the wellbeing and safety of women when they venture outside their homes persist. These factors highlight the urgent need for a tool to ensure the safety and empowerment of women. Smartphone ownership is fairly widespread, even in rural areas, making a mobile application for women's safety and empowerment an ideal solution that would be accessible to the majority across the country. The proposed app will feature essential tools such as SOS, location sharing, emergency contacts, and easy access to NGOs and helpline numbers. Furthermore, it will provide discussion forums, tutorials, and articles on women-related issues, along with easy access to medical and legal support.

Sr.No.	Paper ID	Title
13	25	Surabhi Sharma Laharia, Abhishek Laharia, Anuj Bhargava <i>"Futuristic Approach Towards Internet Beyond 5G Era"</i>

Abstract — The goal of the 5G internet is to enable realtime transmission of haptic information like touch, actuation, motion, vibration, and surface texture over the Internet along with the usual data and audiovisual traffics. This is intended to cause a paradigm shift from content-oriented communications to steer/control-based communications. In order to address the complex issues facing human society, such emerging technology—is considered as the next evolution of the Internet of Things, is predicted to open up a wide range of opportunities for the technology markets in from teleoperation systems and e-Healthcare. Virtual Reality (AR/VR) and automotive safety. However, the implementation of TI over wireless media in the future Fifth Generation (5G) networks and beyond poses a number of unconventional communication issues and strict demands for ultra-high throughput and ultra- low latency.

Sr.No.	Paper ID	Title
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14	26	Prof. Pranal Kakde, Siddhesh Kaskar, Umair Khan, Saket Telang <i>REACT CRYPTO WEBSITE</i>
<p>Abstract — Explore the dynamic world of cryptocurrencies with our React-based website, offering a comprehensive platform for in-depth analysis of cryptocurrency charts. Empower your decision-making process by gaining insights into market trends and price movements. Seamlessly integrate MetaMask to facilitate secure and efficient Ether transfers between accounts, providing users with a powerful and user-friendly experience in managing their digital assets.</p>		
Sr.No.	Paper ID	Title
15	27	Dr. Bhavin C. Shah, Prof. Mohan Kumar, Dr. Vivek Ramakrishnan Savithri, Prof. Sandip Zade <i>Analyzing and positioning the joint movements and controlling the angular position to achieve a half squat - sit and rise motion while minimizing the risk of fall for a humanoid robot</i>
<p>Abstract — The proposed paper aims to improve the efficiency of humanoid robots by analyzing and positioning their joint movements, controlling angular position in order to perform half squat - sit and rise motions while minimizing the fall for a humanoid robot.</p>		
Sr.No.	Paper ID	Title
16	28	Dr. Shikha Gupta, Sakshi Lokhande, Mayuri Jagdale, Jasmine Joseph, Jimit Jain <i>HazeErase: Enhancement of Satellite Imagery</i>
<p>Abstract — Haze and fog are common atmospheric phenomena that can degrade the visibility and quality of satellite captured images. Hence, image dehazing plays a pivotal role in enhancing the clarity and quality of satellite imagery obtained under cloudy situations. In this research work, we explore a comprehensive approach to dehazing multispectral satellite images by employing CycleGAN (Cycle-Consistent Generative Adversarial Networks), Convolutional Neural Network (CNN), and Depth-wise Separable Convolutional Neural Network (DSCNN) architectures. Additionally, we conduct an in-depth analysis of different loss functions to assess their impact on dehazing performance. Our proposed method involves a two-step process. Firstly, a CycleGAN is employed to understand the translation between hazy and haze-free (Dehazed) images in an unsupervised manner. This process facilitates the removal of haze and the enhancement of visual clarity. Subsequently, a Convolutional Neural Network is fine-tuned to further refine the Dehazed images, leveraging its capability to capture intricate spatial features. We embark on this study by training a CycleGAN model on unpaired multispectral hazy and haze-free satellite image data. The versatility of CycleGAN allows us to establish a translation between hazy and haze-free domains, generating imagery that reflects the underlying scene without the detrimental effects of haze. We assess the fidelity of generated multispectral images through specialized loss functions, contributing to a sustainable solution for reliable image synthesis</p>		
Sr.No.	Paper ID	Title

17	30	Abhinav Avhad, Suyog Gawade, Shreyash Sandbhor, Shubham Suta, Prof.Kirti Mhamunkar <i>Job Portal</i>
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Abstract — In this competitive era, people are becoming more and more educated and their jobs are decreasing. Companies want the best talent in their field. This makes it difficult to find people who are smart enough to hire. Companies are also increasingly working to find talent that meets their requirements. Thinking about these issues, you can think of processes that can handle this process and simplify your work. This project is about a recruitment process that takes place online. The recruitment process is handled by our system here. This project allows you to apply for jobs in companies that are interested in the vacancies available within the company. Registration, that person receives an account and is called a logged-in user. If eligible, he will interact with the system and make the update. This project addresses the needs of company managers to place a recruitment module on a company's website, allowing users who visit the website to view internal job openings and apply directly from a remote location. Created to meet. Job openings are posted by administrators based on the needs of within the company. Administrators have all rights to edit this process except for the evaluation process. The steps in the evaluation process cannot be predicted because the evaluation process is company-specific. This also includes levels on the admin side, so permissions have a significant impact on the functions assigned to different admin levels. Privileges are userspecific, so different administrators at the same level have different privileges and therefore different capabilities.

Sr.No.	Paper ID	Title
18	31	Dr. Shikha Gupta, Kripa Sarvaiya, Aamir Talat, Sanya Shrivastava, Atharva Patil <i>E-Commerce Websites Through Containerization, Kubernetes Orchestration, And Istio Service Mesh Monitoring</i>

Abstract — The concept of microservices has emerged as a transformative paradigm, and departure from monolithic architectures. We will showcase how this architecture enables organizations to achieve enhanced resilience, fault isolation, and improved resource utilization. The utilization of Docker containers empowers e-commerce websites with isolated, lightweight, and reproducible environments, streamlining deployment and reducing compatibility issues. Kubernetes orchestration enhances the system by automating the management of these containers, providing dynamic scaling, high availability, and efficient resource allocation. The pivotal aspect of this study lies in the incorporation of the Istio service mesh, which offers a robust framework for traffic management, load balancing, and security, thereby mitigating potential bottlenecks and enhancing fault tolerance. The Kiali dashboard, a powerful visualization tool, grants operators' real-time insights into the traffic flow, service dependencies, and network performance, facilitating proactive decision-making and optimizing the overall user experience. Through a comprehensive analysis of this integrated approach, we demonstrate how it not only addresses the challenges of scalability and reliability in e-commerce but also provides an adaptable architecture. The findings offer practical insights for businesses aiming to deliver seamless and dependable ecommerce solutions. E-Commerce Websites through Containerization, Kubernetes Orchestration, and Istio Service Mesh Monitoring.

Sr.No.	Paper ID	Title
19	33	Jay Vanjare, Vivek Prajapati, Atharva Ajgaonkar, Maahi Khemchandani, Dr. Manjusha Deshmukh <i>E-Fir Registration Using Chatbot</i>

Abstract — We are incorporating a conversational agent into the Electronic First Information Report (E-FIR) system for public accessibility. Our choice to implement the online platform stems from the escalating number of cases on a daily basis. We have made the decision to adopt the online portal because the number of cases is rising daily and we are currently evaluating the COVID-19 situation at a time when everyone is busy in their own world. Additionally, it aims to close the communication gap between the general public and the authorities. Citizens frequently witness numerous offenses, but the majority of them go unreported because of the time-consuming and stressful process. In this project, we are putting the simplest method into practice so that people can quickly file complaints. To that end, we have introduced a chatbot for filing complaints, though we can also use the option the chatbot provides. The chatbot which is made of Rasa framework asked some basic questions to the user to gain the information required for registration of the E- FIR. The E-FIR are available in the national as well as local languages of the country according to the user's needs in this project. Here, the required details for filling out the E-FIR are extracted directly from the Aadhar card with the help of artificial intelligence (Tesseract). The user can also monitor the complaint that was registered by them. Since then, the government has been working very hard to reduce the cost of information technology and make it equally accessible to all people in both rural and urban areas. It involves utilization of primary factor that all of the computing resources hardware, software, and network infrastructure are hosted online. By doing this, only user complaints will be sent to the police station database, protecting the privacy of current system users' information. The primary web application will be overseen and maintained by the administrator stationed at the police facility.

Sr.No.	Paper ID	Title
20	34	Rhusikesh Chavan, Gnana Saravanavel, Manish Rawale, Prof. Maahi Khemchandani <i>IOT Based Smart Tree Monitoring System</i>

Abstract — Trees are one of the common species on the earth that plays an important role in protecting the ecological environment. It is necessary to keep tree healthy growth to avoid a potential hazard for humans. A Tree Monitoring System using IoT is a technology-based system that allows individuals or organizations to track and analyze the health and growth of trees in a given area. The system can utilize a variety of sensors and tools, such as environmental sensors, and soil sensors, to gather data on the trees' health and growth over time. Also, in addition to this we are implementing a smart irrigation system along with tree monitoring. Both the systems will be dependent on each other. In smart irrigation, we determine the parameters that are monitored in irrigation systems regarding water quantity, soil characteristics and weather conditions. In this system we are also using QR code which will contain information about a particular tree and anyone can scan the QR code and get the information about a tree. A Tree Monitoring System with Smart Irrigation can be used in a variety of settings including urban forests, parks, and other natural areas and to monitor individual trees in residential or

commercial settings. By providing real-time information about tree health and growth, a tree monitoring system can help to ensure the long-term health and sustainability of trees in any environment. The sensors are placed in and around the tree to measure important parameters that can affect the growth and health of the tree.

Sr.No.	Paper ID	Title
21	36	Sheetal Bukkawar, Tejas Gavale, Aniket Handore, Sarita Kale, Nilesh Patil <i>Devnagari Character Recognition</i>

Abstract — The objective of this project is to build a Deep Learning-based system for recognizing Devnagari characters. Handwritten character recognition is gaining increasing importance because it plays a crucial role in automating systems. The process of recognizing handwritten characters involves the use of a machine to detect and identify characters from an image of text, which is then converted into machine- understandable code. This task is fundamental but challenging in the discipline of pattern identification. To recognize Devanagari script characters, we used a recently published image dataset known as the Devanagari Character Dataset. Devanagari script is one of the several language scripts used in India and comprises 12 vowels and 36 consonants. Our approach uses a deep learning model that recognizes the characters and consists of five primary steps: pre-processing, segmentation, feature extraction, prediction, and post- processing. We trained our model using Convolutional Neural Networks (CNN) and applied image processing techniques to improve its accuracy.

Sr.No.	Paper ID	Title
22	39	Shubham Haryan, Anurag Prajapati, Siddhesh Rokade, Rohit Yadav and Prof. Pragya Jain <i>Cloud—based vigilance Tech ROBO (CVTR)</i>

Abstract—The Cloud—Based Vigilance Tech Robo (CVTR) is a cutting—edge robotic solution designed to revolutionize surveillance, security, and environmental monitoring in diverse applications. This autonomous Robo combines advanced robotics, cloud computing, and real—time data analysis to enhance the capabilities of traditional security and facility management systems. CVTR’s key features include autonomous patrolling, image capture, real—time alert generation, environmental condition monitoring, data analysis, and remote access via a secure cloudbased platform. Equipped with an array of sensors and cameras, CVTR navigates its environment intelligently, capturing images and videos. These images are processed and also transmitted to a cloud—based server for further analysis and storage. CVTR’s environmental monitoring capabilities are equally impressive. It can detect and record various parameters, including temperature, humidity, air quality, and more. Environmental data is continuously analyzed to identify patterns and deviations, allowing for predictive maintenance and improved facility management. Furthermore, CVTR is accessible remotely through a user friendly web—based interface. Authorized personnel can monitor real—time feeds, access historical data, and make informed decisions from virtually anywhere, enhancing convenience and flexibility

Sr.No.	Paper	Title
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	ID	
23	40	Divya Acharya, Aparna Shukla, Priyanka Malgaonkar <i>A Study of Application of Group Theory</i>
<p>Abstract — Group theory, a branch of abstract algebra, provides a powerful mathematical framework that has found applications across a spectrum of scientific and mathematical disciplines. Group theory has evolved into a dynamic field with far-reaching implications. While historical attempts faced challenges, contemporary applications demonstrate the interdisciplinary nature and versatility of group theory.</p>		
Sr.No.	Paper ID	Title
24	41	Garima Gurjar Unhale, Dr. Mangesh Nikose <i>The Adoption of blockchain technology in the trading of Energy: A Review</i>
<p>Abstract —This study gives a brief literature review on blockchain-based energy trading in the disciplines of energy trading and blockchain because blockchain and energy trading have become popular subjects in business and academics. Following the presentation of the background and development process, a survey and analysis of blockchain applications in the energy trading industry is conducted. Finally, conclusions are summarized and key future prospects in this area are underlined.</p>		
Sr.No.	Paper ID	Title
25	42	Lokesh Parab, Lavanya Reddy, Siddhesh Shirdhankar, Rohit Yadav, Mohan Kumar <i>Affordable education experience on Mobile VR Headset</i>
<p>Abstract —Low-cost Virtual Reality (VR) headset platforms, addressing the pressing need for accessible immersive experiences. A comprehensive analysis is conducted on a spectrum of budget-friendly solutions, including standalone headsets, smartphone-based configurations, and open-source alternatives. Evaluation criteria encompass affordability, display quality, tracking precision, and compatibility with existing hardware. This experiment delves into the diverse applications of these platforms, showcasing their potential impact in education, training, therapy, and entertainment across various domains. Additionally, the integration of Bluetooth controllers is emphasized for enhanced user interaction and immersion. Optimization strategies are discussed to bolster performance and alleviate challenges. This experiment serves as a valuable resource for developers, and enthusiasts in pursuit of cost-effective VR experiences, furthering the objective of democratizing access to immersive technology.</p>		
Sr.No.	Paper ID	Title
26	43	Prof. Sandip Zade, Dr. Bhavin C. Shah, Prof. Mohan Kumar, Dr. Vivek Ramakrishnan <i>TO STUDY NLMS ALGORITHM FOR ADAPTIVE ECHO CANCELLATION</i>

Abstract —Errors occur during data transmission as a result of additive noise, signal interference, echo, and other issues brought on by the rapid expansion of communication technologies. Adaptive filters are one way to lessen these channel effects. This work introduces the normalized least squares (NLMS) algorithm-based adaptive echo cancellation. An expanded form of the LMS algorithm is the NLMS algorithm. Compared to the least squares algorithm, the normalized least squares algorithm shows a better trade-off between simplicity and performance.

Sr.No.	Paper ID	Title
27	44	Nasim Khan, Vishal Jadhav, Sai Jadhav, Sahil Bhosale, Prof. Sandip Zade <i>Review on UAV and UGV-Based Remote Multi-Gas Sensing for The Petroleum Industry And Environmental Monitoring</i>

Abstract —In a world where environmental concerns and industrial demands are growing, advanced technologies play a vital role in addressing complex challenges. This research proposes a novel solution: a remote-controlled multi-gas sensing drone. Built on the foundation of unmanned aerial vehicles (UAVs) and unmanned ground vehicles (UGVs), this drone represents a significant breakthrough in environmental monitoring and industrial applications. The petroleum industry, which is essential to the global economy, faces environmental risks such as leaks, spills, and emissions. Effective gas emission monitoring, especially in remote or hazardous locations, is essential. Traditional methods often fall short. Environmental monitoring is also critical for understanding and mitigating climate change and human impacts. Drones have enhanced our ability to collect environmental data. This research introduces a hybrid UAV-UGV drone equipped with advanced gas sensors. It can autonomously navigate complex terrain, inspect infrastructure, and detect gas emissions in real-time. The paper explores the technical aspects of the drone's design, sensor selection, and remote control integration. It also discusses potential applications, ranging from gas leak monitoring to comprehensive environmental surveys. In conclusion, the fusion of UAV and UGV technologies in this remote-based multi-gas sensing drone has the potential to revolutionize the petroleum industry and significantly improve environmental protection.

Sr.No.	Paper ID	Title
28	45	S. Tony Alosius, G. Kavın Velavan, Ms. Sathya, Dr. Manikandan S, Mr. Surether I <i>Autonomous Drone Patrol and Surveillance System using Computer Vision</i>

Abstract —The core objective is to create an innovative Autonomous Surveillance and Patrol System, uniting the realms of computer vision and drone technology. It tackles critical issues such as manual tracking in crowded or hard-to-reach areas, as well as the tracking of suspects within densely populated zones. The project distinguishes itself by the incorporation of YOLO

v8, a state-of-the-art computer vision model, for precise object detection and facial recognition, thus enabling effective facial tracking. Coupled with the versatility of the DJI Tello Nano drone, it offers a comprehensive solution to these challenges while being adaptable to specific needs, all within a single integrated framework.

Sr.No.	Paper ID	Title
29	47	Avinash Khambayat, Dnyaneshwar Kadam <i>Differential Transform Method to find Numerical Solution of Differential Equations of Higher Order</i>

Abstract —In this paper, we solve differential equations of higher order having boundary values using Differential Transform Method (DTM). The method yields semi analytical numerical solution for the equation, effectively capturing the exact solution. Some differential equations of higher order having boundary values are solved using DTM.

Sr.No.	Paper ID	Title
30	48	AswathyS <i>Bridging the Gap: Data Science empowers Patients through Personalized Healthcare Experiences</i>

Abstract — The healthcare landscape is at a pivotal juncture, with traditional models struggling to keep pace with the ever-evolving needs of patients. In this context, data science emerges as a potent force, bridging the gap between passive care and active patient engagement. This paper explores the transformative potential of data science in empowering patients through personalized healthcare experiences. We delve into the integration of advanced analytics with patient-centric data, enabling the creation of tailored treatment plans, proactive interventions, and enhanced self-management tools. The focus lies on fostering active patient participation in decision-making, promoting informed medical choices, and ultimately, optimizing health outcomes. We showcase concrete examples of data science applications, from disease prediction and early intervention to medication adherence monitoring and personalized lifestyle recommendations. Furthermore, we address the ethical considerations and potential challenges associated with data privacy and algorithmic bias in healthcare. By bridging the gap between data science and patient empowerment, we pave the way for a future of personalized healthcare experiences, where patients are not merely recipients of care but active participants in their own health journey.

Sr.No.	Paper ID	Title
31	49	Sonali Bhiwandkar, Prof. Odilia Gonsalves, Prof. Leena Raut, Anand Valliappan <i>PERSONAL AI DESKTOP ASSISTANT</i>

Abstract —In the realm of contemporary computing, the integration of Artificial Intelligence (AI) systems into everyday tasks has revolutionized user interactions with digital technologies. This research paper presents a meticulous exploration into the intricacies of creating a cutting-

edge Personal AI Desktop Assistant (PADA) utilizing the versatile Python programming language. By delving into the nuanced intersections of AI, Natural Language Processing (NLP), and Machine Learning (ML), this study elucidates the underlying principles and algorithms essential for constructing an intelligent desktop assistant. A thorough analysis of existing personal AI assistants sets the stage for this research, critically examining their functionalities, strengths, and limitations. Employing Python libraries such as NLTK, SpaCy, and TensorFlow, this paper demonstrates the systematic methodology employed in developing a highly responsive and contextually aware assistant. Emphasizing core components like speech recognition, sentiment analysis, and intent recognition, the implemented PADA showcases advanced capabilities in understanding user queries and providing contextually relevant responses.

Furthermore, our research scrutinizes the ethical dimensions of personal AI assistants, addressing vital concerns encompassing user privacy, data security, and consent. The study delves into the intricate intricacies of data management, ensuring the safeguarding of user information. Additionally, this paper explores the evolving landscape of AI ethics, emphasizing the responsible deployment of technology in aligning with societal values and norms. The exploration extends to the potential applications of PADA in diverse sectors, including healthcare, education, and smart home systems. By envisioning scenarios wherein PADA augments medical diagnostics, facilitates personalized learning experiences, and optimizes home automation processes, this research illuminates the transformative impact of AI-driven desktop assistants on various domains.

Sr.No.	Paper ID	Title
32	50	Prof. Vivek Ramakrishnan, Prof. Dr. D. J. Pete, Dr. Bhavin C. Shah, Prof. Sandeep Zade <i>A State of the art Exposure Fusion algorithm for fusion of Multiple exposure images revisited</i>

Abstract — We present a method for combining images with bracketed exposures into a single high quality image without resorting to HDR. The acquisition pipeline can be streamlined by the physically based HDR assembling stage. This is computationally efficient and saves time by avoiding the calibration of camera response curve. Further you use flash based imagery on the loop. Using basic quality metrics like saturation and contrast our method combines many exposures into a single coherent whole. Because the sequences brightness changes over the time, this is done in multi-resolution method. Image quality is improved and is on par with that of other tone- mapping operators.

Sr.No.	Paper ID	Title
33	51	Dr. Manjusha Deshmukh, Ameya Bhatt, Pranit Ghewade, Nishant Shinde, Raj Shinde <i>A Novel Deep Learning Approach to Identify Medicinal Plants</i>

Abstract — Medicinal plants are revered through history for being able to maintain animal health. Identifying these plants, on the other hand, is a tedious and challenging operation that necessitates the skills of a specialist. Although it is a necessary skill, recognizing medicinal plants is difficult. We strive to transform the field of medicinal plant identification by

introducing an innovative machine vision system. Our goal is to streamline and automate the identification process in real-time. Method: Our approach involves the creation of a comprehensive computer vision system, leveraging a Convolutional Neural Network (CNN) model. This sophisticated system excels in accurately recognizing various plant species from images, marking a significant advancement in the realm of medicinal plant identification. The image recognition model's architecture is made up of 5 convolution blocks and the classifier block. In every fifth convolutional block, the result of one convolution block acts as a starting point for the next. Following every layer of convolution, activation functions such as ReLU layers are added. Findings: Our system functions seamlessly in real-time, offering the convenience of species identification through a straightforward process. Users can effortlessly capture an image using a mobile camera or upload an existing picture, making the identification process both efficient and user-friendly. After the validation step, the project provides a classification of 98.3% of accuracy. Novelty: The proposed method detects plants with medicinal properties. It operates in real time and holds the promise to supplant outdated identification methods, ushering in a more advanced and efficient approach to species recognition.

Sr.No.	Paper ID	Title
34	53	ANKIT DEOGHARKAR, JYOTI MALI, JYOTI GURAV, MAHALAXMI PALINJE <i>ANALYSIS OF HIRA MODELING IN CST-MW ACROSS VARIED f/D RATIOS</i>

Abstract — This document offers an in-depth investigation into the Half Impulse Radiating Antenna (HIRA) and assesses the impact of varying f/D ratios on its operational efficiency. Leveraging the capabilities of CST-MW Studio, a modified HIRA structure is modeled, exhibiting enhanced area efficiency and broader bandwidth characteristics. The antenna, designed for efficient radiation of High Electromagnetic Pulses (HEMP), operates within the frequency range of 100 MHz to 6 GHz. Notably, simulations targeting f/D ratios of 0.1, 0.25, 0.38, 0.5, and 0.7 are conducted to optimize the critical parameter for mitigating beam divergence. Our findings reveal an exceptional achievement - a wide bandwidth of 3.8 GHz and a gain of 19.19 dB obtained for an optimal f/D ratio of 0.38, with a half parabolic dish diameter of 70 cm. Beyond theoretical insights, the paper underscores practical applications, including immunity measurement testing and ground-penetrating radar, positioning the HIRA as a versatile and high-performance solution in electromagnetic pulse scenarios. The results not only contribute valuable insights into antenna design and optimization but also open avenues for future research in this domain.

Sr.No.	Paper ID	Title
35	54	Rahul Deshmukh, Pushpesh Mishra, Arvind Yadav, Harshvardhan Desai, Prof. Jignesh Patel <i>A Peer-to-Peer Mock Interview Platform</i>

Abstract — The Mock Interview Platform Web Application is a comprehensive online tool designed to enhance job seekers' interview preparation by providing a realistic and interactive simulation of interview scenarios. This web application aims to bridge the gap between

theoretical knowledge and practical interview skills, offering users an opportunity to refine their communication, problem-solving, and interpersonal abilities. The Mock Interview Platform Web Application serves as a valuable tool for individuals seeking to improve their interview performance and this Platform aims to empower job seekers by providing a comprehensive tool for honing interview skills, boosting confidence, and fostering a supportive community. Interview Scheduling where users can schedule mock interviews at their convenience. Flexible options for choosing interview types, such as technical or industry-specific interviews. Interview Simulation where realistic interview simulations with customizable scenarios. Incorporation of video and audio components to simulate face-to-face interviews. Question Banks that offer extensive question banks covering a wide range of industries and job roles. Users can select specific question categories to focus on areas of improvement.

Sr.No.	Paper ID	Title
36	56	Dr Kavita Piyush Bani, Dr Ritu Sharma <i>Unveiling the Future of Internet of Things (IoT): Applications and Market Trends</i>

Abstract —The notion of the Internet of Things (IoT) has quickly developed into a ubiquitous technology that links the digital and physical worlds, revolutionizing various sectors and aspects of daily life. This review of the literature offers a thorough analysis of the major IoT technologies, as well as the field's present status, obstacles, security issues, potential uses, and market trends. This study attempts to illuminate the prospective paths and obstacles that the IoT landscape will present by examining studies that have already been done and industry reports. This literature review paper aims to give academics, business experts, and decision-makers a comprehensive resource for understanding the current state, future uses, and market trends of the Internet of Things.

Sr.No.	Paper ID	Title
37	57	Suraj Pawar, Sumit Yadav, Aashish Lokam, Omkar Ayare, Prof. Prajakta Pawar <i>Safe Ride Advanced Protection System</i>

Abstract — By introducing an integrated solution that combines an Overheat Engine Detection System and a Cliff Road Fall Avoidance mechanism, this project promises to revolutionize automotive safety. The suggested solution greatly lowers the risk of engine overheating and accidents on cliff-edge roads by utilizing cutting-edge sensor technology and clever algorithms to provide real time monitoring and preventive actions. The Overheat Engine Detection System monitors the engine's temperature continually using a network of sensors and data analytics. By doing this, the system increases the vehicle's overall reliability by protecting the engine from serious harm and averting unplanned malfunctions. The system may adjust vehicle controls and take proactive steps to avert accidents on dangerous cliff-edge roads thanks to this real-time assessment. This cutting-edge technology has enormous potential to improve car safety by lowering the risk of overheating engines and cliff-edge collisions, saving lives. With the combination of cliff road fall avoidance and overheat detection in one all-inclusive, intelligent system, this is where the future of automotive security begins. The majority of an embedded system A microcontroller is a piece of hardware that functions as a computer on a chip. A

microcontroller is made up of an analog to digital converter device, memory, CPU, and input/output unit.

Sr.No.	Paper ID	Title
38	58	Ruchi Chauhan, Shikha Malik, Prajakta Pawar, Dhanashree Pannase <i>A Survey on Data Compression Techniques</i>

Abstract —Data compression techniques are pivotal across diverse fields, serving the common goal of efficiently reducing data size for storage, transmission, and processing. In lossless compression, methods such as ZIP and RAR find application in archiving. This study presents a comparative analysis of various innovative data compression techniques across diverse domains. For power quality disturbances, a method integrating Independent Component Analysis (ICA), Fast Fourier Transform (FFT), and adaptive thresholding outperforms Wavelet-based methods. In digital signal modulation recognition, neural network pruning optimizes deep learning deployment in edge equipment, achieving notable reductions in parameters and processing time. Additionally, a novel electrical signal compression technique combining wavelets and compressed sensing achieves a remarkable compression ratio of 1020:1. The study also introduces an efficient image compression method using matrix completion, achieving up to 80% compression with acceptable visual quality. Lastly, an adaptive dictionary predictive coding approach proves effective for lossless compression of periodic signals, surpassing traditional methods. These approaches contribute to advancing data storage and recognition technologies across various applications. preserving data integrity during compression.

Sr.No.	Paper ID	Title
39	59	Anshul Unagar, Omkarnath Rao, Shivam Shikhare, Harsh Singh, Ruchi Chauhan <i>Smart Attendance Using Machine Learning</i>

Abstract — The Smart Attendance System using Deep Learning offers a significant improvement in attendance management, addressing issues associated with conventional methods. Traditional attendance-taking methods consume valuable lecture time and may be prone to errors. This system employs facial recognition, specifically utilizing algorithms like MTCNN, to automate the attendance tracking process. The proposed solution leverages Deep Learning, Convolutional Neural Networks (CNN), OpenCV, and python for face detection and recognition. This approach compares input faces with a dataset, recognizing individuals and automatically recording their attendance, including names, time, and date, in an Excel sheet. The system not only streamlines attendance tracking in educational institutions but also holds potential applications in security for banks, organizations, and large public gatherings. This efficient and accurate solution aims to optimize resource allocation and eliminate common errors associated with manual attendance marking methods.

Sr.No.	Paper ID	Title
40	60	Rohit Sawant, Sanjivani Shinde, Prathamesh Pimpalkar, Preeti Jethva, Dr. Jyoti Mali

		<i>Realtime library system app using Kotlin</i>
Abstract —		
Sr.No.	Paper ID	Title
41	61	Ritik R. Pandey, Sakshi P. Joshi, Bhavesh D. Nanda, Yash D. Kelhe, Dhruv S. Dalvi, Manoj Kavedia <i>EmpowerVoice: Redefining Parenthood with IOT Solutions</i>
<p>Abstract —Parents face unique challenges, especially in the field of infant care, where prompt responses to infant needs are crucial. Traditional parenting often involves a trial-and-error approach in translating an infant's cries, leading to a potential gap in addressing their needs. Additionally, when they are physically apart from their infants can create challenges in providing timely care. There is a need for a comprehensive solution that not only detects and responds to infant cries effectively but also enables real-time monitoring and remote connectivity. EmpowerVoice is a groundbreaking IoT-based parenting solution that addresses these challenges by integrating a ESP-Watch and a smart baby cradle. The cradle, equipped with sensors, creates a comforting environment for the infant by initiating actions like playing lullabies and gentle swinging upon detecting a cry. Simultaneously, cry data is used to analyze cry patterns, where machine learning algorithms predict the cause, notifying the parents on their watch which facilitates quicker and more informed responses. The ESP-Watch provides visual feedback and tactile alerts through vibrations, ensuring that parents are promptly notified when their attention is needed. Furthermore, EmpowerVoice offers real-time monitoring capabilities, allowing parents to check on their infants remotely. The integration with the Telegram Bot provides a convenient platform for live streaming, fostering a seamless and accessible connection between parents and their babies. This innovative approach aims to redefine the parenting experience, providing a harmonious blend of advanced features and real-time connectivity for a more empowered and enriched caregiving journey.</p>		
Sr.No.	Paper ID	Title
42	62	Dr. Priyanka Badani, Dr. P. N. Nemade, Dr. Bhushan Sonawane, Dr. Abhilasha Saini <i>Inorganic Nanoparticles in cosmetics: A Comprehensive overview of Applications</i>
<p>Abstract — In the world of cosmetics, a variety of inorganic nanomaterials, each with different chemical compositions and structures, are utilized. Their size and shape largely influence their effectiveness in cosmetic products. The current review article thoroughly explores how inorganic nanoparticles are applied in cosmetics, highlighting the specific features that make these particles suitable for cosmetic use. It pays special attention to examining how inorganic nanoparticles act as UV filters and antimicrobial agents, providing a foundational scientific overview of the principles guiding these applications. It also lists the types of nanoparticles commonly found in commercial cosmetic products, showcasing their wide range of uses and their alterations to product properties. Additionally, it explores the integration of inorganic nanoparticles as both active elements and nanocarriers.</p>		

Sr.No.	Paper ID	Title
43	63	Prof. Mohan Kumar, Dr. Bhavin Shah, Dr. Vivek Ramakrishnan, Prof. Sandip Zade <i>5G for Covid-19 and future Healthcare Challenges</i>

Abstract —The global toll of over 515 million COVID-19 cases and 6 million deaths, along with the sacrifice of 115,000 healthcare workers, prompted a comprehensive review of 5G technology's impact on healthcare. In the fight against COVID19, 5G has significantly improved diagnostics, patient monitoring, and contact tracing through high-speed data sharing and real-time capabilities. It has streamlined vaccine distribution, enhanced emergency medical services, and shown promise in tele surgery and robot-assisted tele ultrasound. Future applications include surveillance of vulnerable populations and advancements in nano-oncology. However, challenges such as infrastructure, health risks, security, and integration with other technologies must be addressed for widespread adoption. Overall, the integration of 5G holds immense potential in revolutionizing global healthcare delivery.

Sr.No.	Paper ID	Title
44	65	Prof. Bhagyashree Gaikwad, S. Kasthurirangan, Dr. P. N. Nemade <i>Melting of Solids: Scaling with Atomic Parameters</i>

Abstract —The melting point is a very important parameter in understanding the purity of compounds. However, it is very difficult to calculate the exact melting point as there is a huge possibility of human error in the visual detection of melting point and even a small amount of impurity or different pressure at regions of different altitudes can cause melting point to vary, thus melting points are generally calculated in range. Here we have developed a microscopic model for the melting of crystals where the onset of melting is correlated with the thermal fluctuation of the atoms from their respective mean position, after crossing a certain limit. Further, we have inverted the relation to demonstrate that the unknown melting point of some elements can be approximately interpolated from some atomic data sets if known. We also identify an additional scaling with atomic radius, which when implemented leads to a much more tightly bounded parameter space for estimation of melting points.

Sr.No.	Paper ID	Title
45	67	Kshipra Pandey, Dr. Chandrakant Rathore. <i>Whale Optimization for Optimal Power Flow</i>

Abstract —The optimal power flow (OPF) of power system is to optimize the objective function such as generation cost by adjusting control variables on the premise of satisfying operation constraints and supply–demand balance. Because of its complexities, standard formulae are insufficient for the present scenario. Therefore, the multi-objective optimal power flow problems have been explored in this paper. Optimization is done by Whale Technique.

Sr.No.	Paper ID	Title
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46	68	Shruti Jagtap, Pranav Kini, Rahul Suthar, Prof.Mahendra Patil <i>VENTUREBOOST — BLOCKCHAIN—DRIVEN COLLECTIVE FUNDING DAPP</i>
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Abstract — The purpose of this initiative is to provide aspiring business owners a thorough grasp of crowdfunding as a substitute source of funding. It examines the key features, alleged advantages, and possible drawbacks of listing a project on a crowdfunding website. The Decentralised Crowdfunding Platform uses smart contracts and blockchain to improve donor protection and fight fraud. By facilitating safe and transparent transactions, the platform transforms crowdfunding by guaranteeing transparency and accountability, enabling contributors to make knowledgeable choices, and directing donations straight to campaigns, thereby reducing the possibility of abuse. By embracing decentralization, the platform gives crowdfunding projects a dependable and secure environment.

Sr.No.	Paper ID	Title
47	69	Jaladhi Sonagara, Harsh Jadhav, Vinit Meher, Abhishek Vaity, <i>A Direct Pellet Extruder For 3D Printing</i>

Abstract —The escalating predicament of plastic pollution, particularly in the realm of packaging, poses a substantial challenge, with India facing the potential loss of over USD 100 billion worth of plastic within the current decade. Conventional recycling methods, such as plastic pyrolysis, exhibit notable environmental drawbacks. In this context, the integration of 3D printing emerges as a pivotal player in the paradigm of the circular economy. Focusing on the Fused Deposition Modeling (FDM) technique, a prevalent method within the 3D printing domain, this approach employs plastic filaments. The process entails the deposition of semi-melted material through a heated extruder and nozzle, creating a product layer by layer. Introducing an innovative extruder known as the Direct Pellet Extruder, this design obviates the necessity for filaments, opting instead for the utilization of plastic pellets or recycled shredded plastic chips. Notably, this adaptation minimizes energy expenditure, marking a substantial advancement in the eco-friendliness of 3D printing. The primary objective of this research endeavor is to address the pressing issue of plastic waste and contribute to rendering 3D printing more environmentally sustainable. The Direct Pellet Extruder, by diminishing the reliance on traditional plastic filaments, not only enhances the ecological footprint of 3D printing but also proves to be a financially prudent alternative.

Sr.No.	Paper ID	Title
48	70	Jyoti Dange, Ullhaskumar Gokhale, Pranoti Nage, Charmi Chaniyara, <i>Beam Scheduling scheme for Interference Suppression in Millimeter-Wave Cellular Network toward 5G</i>

Abstract —Nowadays IoT is becoming a main contributor to a drastic and rising wireless communication. Millimeter wave communication is investigated to be an obligatory alternative for the next generation system. The purpose of this paper is to give an outline on the problem of interference and its impact on performance metric during scheduling. This problem becomes more interesting and significant when two technologies are partially blended. In particular, this technology need a data transmission from more than single user that can not coexist successfully in the same time slot. But adjusting the transmission power and bit rate, several users can

communicate successfully simultaneously. Advance beam scheduling technique SINR is proposed in this paper to achieve more enough resource allocation. Comparing new scheduling described below and basic RR scheme ,simulation experiment were carried out for comparing their ability to restrain the interference between beam at millimeter wave pico station.To solve the above interference issue ,we tend to plan beam scheduling technique in this paper .Specifically signal to interference noise ratio(SINR)simulation result for performance indicator, indicate that cell latency and throughput shows the improvement in their performance in respective user equipment.In 5G mm wave network, competent data retransmission and better bandwidth resource with lower latency and higher throughput are the best outcomes of scheduling scheme described in this paper .The simulation result described that the proposed scheme significantly perform better than that basic round robin scheduling scheme .The SINR achieve the gain 70% at 60 GHZ over the Round Robin scheme

Sr.No.	Paper ID	Title
49	71	Mahendra Patil, Swapna Patil, Dr. Gayatri Vijayendra Bachhav, Priya Borade <i>Generative AI in Healthcare: A Comprehensive Review</i>

Abstract — This technical paper provides an in-depth exploration of the applications of Generative Artificial Intelligence (AI) in the healthcare sector. The healthcare industry is one of several that are being drastically changed by the ongoing breakthroughs in AI technology. Generative AI, in particular, has shown great promise in revolutionizing healthcare by enhancing diagnostics, drug discovery, personalized medicine, and medical image analysis. This paper discusses key applications, challenges, and future prospects of Generative AI in the healthcare domain.

Sr.No.	Paper ID	Title
50	73	Sahil Nilkanth, Suhasini Gunjite, Advay Surve, Omkar Shinde Prof. Jignesh Patel <i>Trade X-Educative trading platform for novice traders</i>

Abstract — This research paper delves into the development, functionality, and impact of Trade-X, an innovative trading education and analysis platform designed to empower novice traders. The study takes a user-centered approach by combining quantitative analysis of user interactions with qualitative evaluation of educational content and analytical tools. Through systematic evaluation, the research investigates the effectiveness of the platform in enhancing users' trading skills, understanding market dynamics, and making informed investment decisions. The findings highlight the significance of integrating educational modules, real-time market analysis, and community engagement features in fostering a holistic learning environment. Additionally, the paper explores the implications of predictive analysis tools and user-friendly interfaces on user satisfaction and trading outcomes.-

Sr.No.	Paper ID	Title
51	74	Mitali Pawar, Monali Pawar, Prachi Panande, Sneha Sah, Prof. Jignesh Patel

Employee Attrition Prediction: A Machine Learning Approach

Abstract — Employee attrition poses significant challenges for organizations globally, particularly in the dynamic Indian job market. The goal of this research project is to create an employee attrition rate prediction model specifically for the Indian environment. Machine learning techniques are utilized to construct a strong attrition prediction model by utilizing past employee data. The model takes into account a number of variables, such as work-life balance, salary, job satisfaction, and demography. The outcomes of this project empower Indian organizations with a valuable tool to anticipate and mitigate attrition, fostering a stable and productive work environment.

Sr.No.	Paper ID	Title
52	76	Dhanashree Pannase, Prajakta pawar, Shikha Malik, Ruchi Chauhan, <i>Study of Database Management System</i>

Abstract —Meeting ever-increasing data management needs requires a solution that guarantees unlimited Achieve while maintaining high performance, massive parallelism, and high availability New sorts of uses, for example, business insight, venture investigation, client relationships the executives, report handling, person-to-person communication, and cloud computing require large collections of structured and unstructured data sets that traditional RDBMSs require. is. Processing requires horizontal scaling to thousands of nodes as needed. Manage failure. In processing distributed processing and big data applications using huge numbers of servers The speed with which interactive applications generate data from large numbers of concurrent users exceeds the capabilities of relational databases, leading to the adoption of SQL databases receiving increasing attention. SQL database systems are related to Relational databases and have several common issues, including scalability, performance, data redundancy, and data integrity. Solutions to these problems include sharing, indexing, normalization, and transactions. Other types of databases have also been developed, including B. NoSQL databases address some of these issues in different ways. This paper describes various database management systems and evaluates their basic design principles: ACID, and basic rules to store the data.

Sr.No.	Paper ID	Title
53	77	Mrs. Rashmi Maheshwari, Nilesh Vishwakarma, Varun Mahajan, Pranav Mistry <i>Pothole Alert System for Safer Two-Wheeler Riding</i>

Abstract —The "Pothole Alert System for Safer Two-Wheeler Riding" proposed project addresses the pressing issue of road safety in India, particularly during the monsoon season when hazardous potholes are prevalent. Potholes are responsible for approximately 6% of accidents, with a significant number involving two-wheeler vehicles. To mitigate these accidents, this innovative system employs a GPS module to pinpoint potholes' exact locations and assess their severity. The data is stored on the device and later transmitted to a remote database when an internet connection is available. A dedicated web page displays this information on a map, allowing both the public and municipal officials to understand the distribution of potholes. The system processes real-time sensor data to instantly identify and classify potholes by severity. When a pothole is detected, it generates immediate alerts for riders

through various communication channels, including visual indicators on the vehicle's dashboard and audible alarms. Integration with a web platform also provides historical data on pothole occurrences and road conditions. This proposed project's goal is to reduce accidents caused by potholes by implementing an intelligent system that rapidly detects and communicates pothole severity to two-wheeler riders. It not only enhances road safety but also encourages collaboration between the public and relevant authorities to facilitate proactive road maintenance. In summary, the Pothole Alert System is a comprehensive solution that leverages technology to address a critical safety issue on Indian roads and fosters a more proactive approach to road maintenance and safety.

Sr.No.	Paper ID	Title
54	79	Dr. Ravi Prakash, Shravani Sawant, Aditya Shinde, Vinayak Utekar, Pratap Nair <i>DESIGN AND DEVELOPMENT OF CONTEXT SENSITIVE DICTIONARY (CSD) USING COMPUTATIONAL LINGUISTIC APPROACH</i>

Abstract —The typical old hand-to-print manner of instruction has given way to a digital context in teaching, reading, writing, and documentation. Since various advancements in the field of computer technologies, there has been a great transition of using the same. This research explores the innovative use of computational linguistics techniques to create a context-sensitive dictionary capable of enhancing language understanding and text analysis. Acknowledging the evolving landscape of language and communication in the digital era, where diverse linguistic expressions, idiomatic phrases, and contextual nuances pose challenges for traditional dictionaries. To address this, the research leverages computational linguistics methods, which allow for the automated extraction and organization of words and their context-dependent variations. This study specifically considers educational videos available in a specific domain. There are so many of these helpful teaching resources available in such large volumes that it is necessary to create automated methods to understand their structure, organization, and content. One of the main tools to be created is an automatic Context Sensitive Dictionary (CSD) generator, in addition to the automatic transcription of the audio and video educational resources. "Context Sensitive Dictionary" presents a pioneering effort to bridge the gap between traditional lexicons and the dynamic, context-rich nature of modern language.

Sr.No.	Paper ID	Title
55	80	Priyanshu Maurya, Mitesh Jethva, Shubham Khale, Shivam A. Gupta, Dr. Suvarna Pansambal <i>Med-Guide</i>

Abstract — This research introduces a groundbreaking software application designed to revolutionize diagnostics. By analyzing symptom descriptions and accurately measuring temperature and blood pressure, the application employs artificial intelligence to offer personalized medication suggestions, identify nutritional deficiencies, recommend tailored dietary adjustments, and provide plausible explanations for symptoms. Positioned as a comprehensive healthcare companion, this innovative platform integrates technology and medical insights to empower individuals in making informed decisions about their health. The

research signifies a paradigm shift towards proactive, personalized healthcare facilitated by advanced technological solutions.

Sr.No.	Paper ID	Title
56	81	Aditya Pise, Resham Patil, Prathmesh Parab, Parth Sojitra, Prof. Mahendra Patil <i>Unmasking WiFi Jamming: Beyond Death</i>

Abstract —The Intel device under consideration finds applications in security operations, leveraging concepts from both cybersecurity and electronics. The Indian military extensively employs communication and intelligence technology, and this device stands out due to its unique capabilities. It has the ability to collect data from neighboring devices simply by being in proximity. This gadget diverges from conventional devices by not only collecting data but also serving as a jammer in various scenarios. It is proficient in disrupting internet connectivity within a specific region. The effectiveness of this device is attributed to a combination of hardware and software components, with a primary focus on the ESP 8266 module. The ESP 8266 module incorporates a Wi-Fi module, enabling the device to establish connections with nearby devices. The connection is established by sending a deauthentication packet to remove the other network, ensuring exclusive communication when executing specified scripts. Moreover, the device, upon connection, has the capability to generate multiple fake clones, adding a layer of confusion for the user. In addition to its role as a data extractor, the device can function as a Wi-Fi jammer within a defined range. The ESP 8266's integrated configuration software allows for flexibility, enabling customization to meet specific requirements. This not only facilitates the extraction of information such as quantitative products connected to the Network and MAC address of these devices but also enables the creation of deceptive clones. These clones contribute to creating confusion, causing users to get trapped in a loop. It's crucial to note that while the device presents intriguing possibilities, its use raises ethical considerations and legal implications. It is imperative to exercise caution and adhere to relevant regulations when deploying such technology.

Sr.No.	Paper ID	Title
57	82	Dr. Ravi Prakash, Omkar Chauhan, Deepak Mishra, Satyam Maurya, Satyam Maurya. <i>DESIGN AND DEVELOPMENT OF DISASTER ALERTING APPLICATION: SAJAG</i>

Abstract —The Proposed app will be an important tool for disaster warning and management by targeting flood-prone areas such in the Republic of India (ISO: Bhārat Gaṇarājya). The overall goal is to reduce injuries from natural disasters such as floods. One of the main benefits is integration with local emergency services, enabling effective coordination between users and first responders in the event of an emergency. This integration will help fulfill the app's core mission of providing real-time disaster information, including location, severity, and estimated impact duration. This important information allows users to make decisions about evacuation and safe areas. The application will also provide features that allow users to create self-awareness plans. These tools will enable individuals and families to effectively prepare for and respond to different situations. To ensure the timeliness and accuracy of information, the app

will use a combination of wireless networking technology and artificial intelligence (AI). The wireless network will send important information directly to users' smartphones, ensuring that there are no interruptions even in the event of power outages or interruptions in connection. Artificial intelligence will play a key role in processing this data and providing real-time insights to users. This disaster alert app aims to save lives by providing timely location information, encouraging users to plan, and using vehicle technology to provide easy access in emergency situations

Sr.No.	Paper ID	Title
58	84	Shrishti Soni, Chaitra Suvarna, Vanshika Ubale, Ameya Bavkar, Dr. Suvarna Pansambal <i>Comprehensive Survey of Multi Factor Authentication Systems</i>

Abstract — This paper presents a multi-factor authentication (MFA) approach to address the increasing incidence of security breaches in systems using password authentication methods. There is a growing need for stronger and more secure systems to provide better protection for sensitive data and resources. Our project solves this problem by providing a multi-factor authentication system that requires users to go through 4 different authentication levels before accessing protected resources. Using a combination of something the user knows, something the user has, and what the user is, our project provides greater security than standard layers of password authentication. This multi-layered strategy adds an extra layer of security to prevent unauthorized access and helps organizations more tightly control who can access critical information and resources, making it harder for hackers to access restricted areas.

Sr.No.	Paper ID	Title
59	86	Adarsh Dubey, Vikram Mule, Prakash Singh, Mihir Soni and Prof.Priyanka Tripathi, <i>ELECTRIC SKATE SCOOTER</i>

Abstract —Traffic congestion, growing concerns on price fluctuations, energy efficiency, environmental issue, depletion of petroleum resources and global warming are the main reasons to adapt electric based transportation. In this paper we have discussed about pocket friendly electric skate scooter since they are compact in size, robust, easy to use as well as environmental friendly. The features with which skate scooter will be equipped are foldability from the handle and stem of scooter, provided with LED lights, indicator and pneumatic tyres for effortless riding. skate scooter will have an integration of motor, a lithium-ion battery pack, frame of steel material, wheels as well as user controls acceleration and braking through handheld throttle that will ensure an output of great efficiency and comfortable ride. This is an ecofriendly vehicle which will be used in the city streets, shopping malls, university campuses overall for small distances. Since this electric skate scooter is made for public usage priority on providing safety and smooth riding is kept above all.

Sr.No.	Paper ID	Title
60	87	Poonam Jadhav, Jitesh Kamble, Khushi Kashyap, Nisha Kendre, Prof. Renuka Nagpure

Ask Genie-Knowledge Representation System

Abstract —Ask Genie-Knowledge Representation System" is an innovative and user-centric platform designed to simplify and enhance the process of accessing and utilizing knowledge. It combines the power of artificial intelligence, vast data resources, and a commitment to experiential learning and community development. Users can seamlessly connect with a diverse range of information, from practical advice to historical insights and scientific discoveries, without the need for extensive web searches or traditional research methods. The system prioritizes accuracy and timeliness by offering real-time updates and continuous learning algorithms, ensuring that users receive reliable and up-to-date information.

Sr.No.	Paper ID	Title
61	88	Ammu Striney J, Trisha Ghosh, Shilpa Gaikwad, Charushila Pawar, <i>Efficient Multi-Output DC-DC Converter with ZVS Integration, Frequency Control, and Closed-Loop Operation</i>

Abstract —This paper introduces a novel converter design targeting cross regulation in single-inductor multi output DC-DC converters. By integrating zero voltage switching (ZVS) and synchronization, the converter aims to minimize switching losses and operational frequency while individual closed-loop controllers reduce output coupling, effectively mitigating cross regulation. Theoretical aspects and simulation results demonstrate improved performance and efficiency. Additionally, the paper discusses a ZVS Buck DC-DC converter with predictive high current mode control for enhanced efficiency and protection, along with a ZVS buck converter employing clamp switches for increased efficiency and power density. Experimental validation confirms the effectiveness of the proposed converter designs.

Sr.No.	Paper ID	Title
62	89	Amir Shaikh, Sunil Sharma, Digvijay Shinde, Om Sase and Prof Jaya Nag mathur. <i>Resume analysis and suggestion system using NLP and ML</i>

Abstract —Today, many people have skills but cannot find high-paying jobs. Even with skills, some people fail. The main reason is a poor presentation of resume skills in interviews. For fresh graduates, our resume analyzer helps make a perfect resume showing skills clearly. It analyzes machine learning concepts. You only get one chance to impress recruiters and get invited to interviews. Even meeting personally with experienced hiring managers is no guarantee your resume will pass automated screening. The Smart Resume Analyzer System functions as a text mining application that organizations use to efficiently analyze incoming resumes. It does this through keyword matching algorithms that compare terms within a resume to those within a personalized dictionary. Once keywords from the dictionary are mapped against the resume through algorithmic matching, the necessary data is extracted and placed into a database. The complete file is then sorted according to multiple criteria for easier assessment. This may include factors such as work history, education level, age, and other relevant background information. The tool aims to provide clarity around an applicant's qualifications and streamline the review process. Though resume screening systems can expedite hiring, human judgment remains integral to fully evaluating fit and potential. Tools therefore serve as aids rather than replacements when identifying top candidates.

Sr.No.	Paper ID	Title
63	90	Trisha Ghosh, Ammu Striney, Shilpa Gaikwad, Charushila Pawar. <i>EXPLORING PARAMETRIC VARIATIONS IN MINIATURIZED MIMO WIDEBAND ANTENNA DESIGNS FOR ADVANCED WIRELESS COMMUNICATION</i>

Abstract —This paper presents the design and analysis of four types of MIMO antennas composed of two planar symmetrical monopole antennas with a slotted ground. The ground plane is shaped into T and L configurations, and a comprehensive comparison of their performance is conducted. Simulation results indicate the antenna's effectiveness in the ultra wideband range, making it suitable for diverse wireless communication applications. Despite its compact size (35mm×22mm), the designed antenna minimizes mutual coupling between its elements, enhancing overall performance. Notably, the study reveals that the L-shaped slot in the ground plane yields superior results, exhibiting a reflection coefficient below -10dB within the frequency range of 2.4-9.1GHz. At specific frequencies, such as 3GHz and 7.1GHz, the return loss drops significantly to below 32.5dB and -62.5dB, respectively. Moreover, the research observes that mutual coupling remains below -10dB over a broader frequency range (approximately 4.4-8GHz) for all design configurations. The structures are simulated using Ansoft HFSS 15.0, and the parametric evaluation highlights the potential applications of these antennas in wireless communication systems.

Sr.No.	Paper ID	Title
64	91	Dhruva Banjan, Rohan Shelar, Sahil Kudtarkar, Sakshi Chaudhari, Prof. Deepali Maste. <i>Rental recommendation using two-dimensional security</i>

Abstract —This study offers a novel strategy for enhancing the rental experience by mixing a two-dimensional security model with an intuitive user interface that is made after the famous dating app Tinder. As the rental market grows providing customers with an enjoyable experience and protecting transaction security becomes increasingly important. Using a strong two-dimensional safety structure, the recommended approach handles possible dangers associated with the rental process. Additionally, a Tinder-like interface is used to improve user engagement and speed the rental selection process. The study provides into great detail into the two-dimensional shapes security model's techniques, system architecture, and difficulty. The success of the proposed strategy can be seen by a thorough study that takes into risk analyses and input from users.

Sr.No.	Paper ID	Title
65	92	Anurag Joshi, Om Sawant, Kartik. <i>SynthRover: A Symphony of IoT and Robotic Precision</i>

Abstract —This paper presents a comprehensive solution for the deployment and management of an Internet of Things (IoT)- enabled robot system utilizing Amazon Web Services (AWS) IoT Greengrass on a Raspberry Pi as the core computing platform. The system comprises two key components: a Trusted User Provisioning application and a Robot Control application. The

Trusted User Provisioning application facilitates the seamless integration of the robot as a Greengrass v2 Core Device within AWS IoT Core, and its functionality is elucidated within this paper. Conversely, the Robot Control application is a web-based interface hosted on Amazon S3, offering realtime control over the robot's movement and camera orientation, while also providing a live video feed from the robot. This paper delineates the technical intricacies of these applications and the underlying AWS services, demonstrating their collective potential for IoT-based robotic systems and their relevance to contemporary IoT research and development. The work presented in this paper adheres to IEEE standards and contributes to the advancement of IoT-based robotics in accordance with IEEE guidelines.

Sr.No.	Paper ID	Title
66	93	Surbhi dhamankar, Pooja Dubey, Ashwini khambe, Payal kheur, Ammu Striney J. <i>AUTOMATION OF COAL MINING ROBOT FOR SAFER MINES</i>

Abstract —coal mining operations present significant hazards to human workers due to the harsh and potentially dangerous environments they entail. To mitigate risks and enhance safety measures in coal mines, the integration of robotics technology has gained attention. This paper introduces a Automation of coal mining robot for safer mines system developed using STM32 microcontroller technology. The robot is designed to perform various tasks crucial for ensuring the safety of miners and monitoring environmental conditions within coal mines.

Sr.No.	Paper ID	Title
67	94	Viraj Khanvilkar, Kaustubh Kabtiyal, Manan Mistry, Vivek Ray, Prof. Jignesh Patel. <i>Cryptocurrency Prediction Using ML: A Comprehensive Review</i>

Abstract — This research paper explores the integration of machine learning algorithms, sentiment analysis, cryptocurrency, market data, social media, news articles, textual sources, neural networks, ensemble methods, patterns, correlations, sentiment-driven indicators, financial outcomes, and digital assets. Leveraging historical market data and sentiment extracted from various sources, our model aims to capture the dynamic nature of the cryptocurrency market. The research employs advanced ML algorithms to analyze patterns, correlations, and sentiment-driven indicators, demonstrating the potential of combining market data and sentiment analysis for more accurate cryptocurrency price predictions. The results contribute to extensive understanding of the intricate relationship between market sentiments & financial outcomes in the volatile realm of digital assets.

Sr.No.	Paper ID	Title
68	95	Viraj Khanvilkar, Manan Mistry, Sujit Giri, Kaustubh Kabtiyal, Prof. Mahendra Patil. <i>Explainable AI in Finance: A Comprehensive Review</i>

Abstract — This paper explores Explainable Artificial Intelligence (XAI) in finance, focusing on its pivotal

role in credit risk management and fraud detection. Emphasizing transparency and accountability, the study examines XAI's technical nuances and applications in credit scoring, fraud detection, and other financial services. By demystifying complex AI models, XAI enhances regulatory compliance and trust. The conclusion envisions future advancements, advocating for XAI refinements and standardized benchmarks. Ultimately, XAI emerges as a transformative force, ensuring transparency and responsibility in the dynamic realm of financial security.

Sr.No.	Paper ID	Title
69	97	Rughwed Kini, Nachiket Pawar, Vedant Kukade, Sonal Parab, Prof. Divya Gajangi <i>RentDex : Vehicle Sharing Platform</i>

Abstract — In the contemporary landscape of shared economies, the Vehicle Rental System with a C2C The model represents a paradigm shift in the way individuals access transportation. This peer-to-peer platform connects vehicle owners (hosts) directly with potential renters, fostering a decentralized and community-driven approach to car rentals. This vehicle rental system is poised to revolutionize the transportation landscape. In this C2C (consumer-to-consumer) paradigm, vehicle owners can seamlessly list their vehicles on a digital platform. By leveraging a C2C model, users can seamlessly share their vehicles, unlocking new possibilities for cost-effective and sustainable mobility solutions. To optimize user experience and affordability, the system incorporates machine learning (ML) for dynamic pricing. This entails real-time analysis of various factors such as demand, availability, and market trends, allowing the platform to adapt pricing dynamically. Consequently, users benefit from competitive and flexible rental rates, enhancing accessibility and promoting the efficient utilization of available vehicles. Furthermore, the integration of sentiment analysis for the review system adds a layer of transparency and trust. Users can express their opinions about both hosts and renters, providing valuable insights for others in the community. This dual-sided review system contributes to a robust feedback mechanism, fostering accountability and reliability within the ecosystem. The Vehicle Rental System thus stands at the intersection of technological innovation, shared economies, and user-centric design, offering a holistic solution to modern transportation needs.

Sr.No.	Paper ID	Title
70	98	Palavee Chavan, Manasi Kamble, Heli Shah, Vanraj Naringrekar, Suchetadevi Gaikwad <i>Spam SMS, Phishing URL & Fraud Online Payment Detection using Machine Learning</i>

Abstract — In today's digital age, the proliferation of spam and fraudulent activities poses significant challenges to online security and user experience. This project aims to develop a comprehensive web-based system utilizing machine learning techniques to detect and mitigate spam SMS, email, and fake URLs. Our website, "Detekt", employs advanced algorithms to shield one from these hazards. We utilize logistic regression to identify phishing websites, ensuring that one doesn't fall victim to deceptive online traps. Multinomial Naive Bayes is used to filter out spam SMS, allowing one to enjoy uninterrupted communication. To safeguard

finances, we employ decision tree analysis to detect and thwart fraudulent online payments. Detekt is a vigilant protector, ensuring a secure and worry-free online experience.

Sr.No.	Paper ID	Title
71	99	Prof. Shweta Sharma, Prof. Bhavna Arora, Prof Pranali Bhusare, Prof Charmi Chaniyara. <i>Analyzing Video Game Pricing and Recommendation Algorithms on PlaySense</i>

Abstract — Video games are widely embraced as a form of entertainment, offering diverse genres and modes to suit various preferences. Beyond mere amusement, they offer cognitive benefits, foster creativity, and alleviate stress. Additionally, certain games facilitate global social connections among players. Despite their manifold advantages, selecting the right game amidst the plethora of options can be daunting. To address this challenge, we propose a website designed to provide tailored recommendations based on user input. This website, constructed using Streamlit, leverages a content-based recommender system driven by cosine similarity, a metric measuring the resemblance between two items. Drawing from a dataset encompassing over 5,000 games from platforms like Steam, epic-games, and PlayStation, we extract features such as genres, themes, keywords, developers, publishers, and platforms. By calculating the cosine similarity between each game pair, we rank the recommendations according to their relevance to the user's input. Users simply input a game they enjoy, and the website generates a list of similar games along with pertinent information and links to purchase from various storefronts.

Sr.No.	Paper ID	Title
72	100	Siddhant Mangade, Om Bhamare, Manan Jotangia, Raunak Gupta, Prof. Prajakta Pawar <i>A Survey on Remote Controlled Lawn mower</i>

Abstract —In the realm of modern landscaping and agricultural practices, the integration of innovative technologies has become imperative for efficiency and sustainability. This paper presents a comprehensive exploration of our major project — the Remote Controlled Lawn Mower. Our Remote Controlled Lawn Mower is a cutting-edge solution designed to revolutionize traditional lawn maintenance methodologies. Fusing advanced robotics with remote control capabilities, this autonomous mower is poised to redefine the way we approach lawn care. The system is equipped with state-of-the-art sensors and a robust communication interface, allowing users to effortlessly control and monitor the mower's operations remotely. This not only enhances user convenience but also contributes to a more streamlined and precise mowing process. Key features include obstacle detection mechanisms, real-time feedback, and a sustainable power system, making our Remote Controlled Lawn Mower an eco-friendly alternative to conventional mowers. The integration of artificial intelligence enables the mower to adapt to varying terrains and conditions, ensuring optimal performance and consistent results. Beyond its technical prowess, this project addresses the broader ecological impact of lawn maintenance. By minimizing human intervention and utilizing intelligent navigation, our Remote Controlled Lawn Mower promotes resource efficiency and reduces environmental footprint. Through this paper, we present a detailed analysis of the design, functionality, and

performance metrics of our Remote Controlled Lawn Mower. We believe that this innovation holds significant potential to transform the landscape management industry, contributing to both efficiency and environmental sustainability.

Sr.No.	Paper ID	Title
73	101	Amankumar Chaudhary, Parnav Desai, Rupal Dambhare, Devang Bhuchhad, Dr. Kavita bani. <i>Swarm Robot</i>

Abstract —Swarm robotics, an emerging field, draws inspiration from the collective behaviors observed in nature, like bird flocks and ant colonies. It centers on decentralized control and collaboration among simple robotic agents. Applications span environmental monitoring, search and rescue, and agriculture. Swarm systems excel in robustness, scalability, and adaptability, even in the face of agent loss. Challenges encompass communication constraints, collision avoidance, and task allocation. Researchers explore bioinspired algorithms, machine learning, and heterogeneous robot integration. Swarm robotics has potential for addressing complex real-world problems and advancing autonomous multi-agent systems.

Sr.No.	Paper ID	Title
74	102	Aishwarya Joshi, Uma Joshi, Vaibhavi Joshi, Manoj Kavedia <i>Conversion from thoughts into actions using mind machine interface for specially abled people</i>

Abstract —Loss of motion is the failure to move a body portion, brief or changeless. In most cases, loss of motion is caused by harm to the nerves, not the influenced range. For example, an injury to the central or lower region of the spinal cord can disrupt work below the injury, even if the structures are very strong. This may result in one or more of the taking after side effects: Failure to move the influenced region, Inability to feel sensation within the influenced area and Failure to control real capacities within the influenced. zone Mind Machine Interface (MMI), in addition known as arrange neural interface, can provide a facilitate channel of communication and interaction between the user's brain and computer. MMI may be utilized to back, improve or redress human cognitive or sensorimotor capacities. MMI gives a modern strategy for making intelligently frameworks competent of changing over human brain waves and muscle action into activities that can be communicated to the exterior world. The MMI framework basically changes over EEG signals, which reflect brain action, into client activities through the system's equipment and computer program. Here are a few particular cases of how MMI can be utilized to offer assistance paralyzed individuals: MMI can be utilized to control wheelchairs, permitting paralyzed individuals to move autonomously. MMI can be utilized to function computers, permitting paralyzed individuals to communicate and get to data. IMM can be utilized to reestablish a few levels of development to paralyzed appendages. IMM are still inside the early stages of progression, but they have the potential to revolutionize the way we treat misfortune of movement. By giving a facilitate communication channel between the brain and computer, IMM can offer help paralyzed people recover many opportunities and quality of life.

Sr.No.	Paper ID	Title
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75	103	Dr Ritu Sharma, Dr Kavita Piyush Bani <i>Impact of Digital Technologies on LSRW Proficiency in Language Learning</i>
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Abstract —This research paper investigates the impact of digital technologies on the development of Listening, Speaking, Reading, and Writing (LSRW) skills in language learning contexts. As technology continues to reshape educational landscapes, there is a growing need to understand its role in fostering language proficiency. The study employs a mixed methods approach, combining quantitative assessments of LSRW performance with qualitative analyses of learner experiences in technology-integrated language programs. The quantitative component involves pre- and post-assessments to measure changes in LSRW proficiency among participants exposed to digital tools (language lab). The qualitative aspect explores learners' perceptions, attitudes, and engagement with technology through interviews and surveys. The research aims to identify specific digital strategies that contribute to enhanced LSRW abilities, considering factors such as interactive applications, multimedia content, and virtual communication platforms. Findings from this study are expected to provide valuable insights for educators, curriculum designers, and policymakers, informing the integration of digital technologies to optimize LSRW skill development in language learning. Additionally, the research contributes to the broader discourse on the evolving role of technology in shaping effective language pedagogy.

Sr.No.	Paper ID	Title
76	104	Bharat Bhagwat Waghode, Dr. Netra Pal Singh, <i>Preparation and Dynamic Mechanical Analysis of Unstructured and Prestructured MR Elastomer</i>

Abstract —The magnetorheological(MR) elastomer has grown obsessed by a potent and state-of-the-art substantial that can be rapidly and precisely manipulated in standings of its mechanical characteristics, either in the occurrence or lack of a magnetic flux. They are composed of elastomer materials that have been mixed with iron particles. Isotropic and anisotropic magnetic resonance elastomers are classified into various groups according on the use of a magnetic flux in the course of the construction process. Magnetizable elements are present in the medium of an elastomer, and they are arranged and managed in a very specific way. after seeing how MREs' structures and behaviors changed. A Dynamic Mechanical Analysis was implemented to demonstrate their performance. Owing to their remarkable mechanical physiognomies, they can be employed in various uses such as pulsation sensors, seismic expedients, and more.

Sr.No.	Paper ID	Title
77	105	Kulashree Patil, Sakshi Singh, Soumya Singh, Prof. Bhavna Arora. <i>Simulation Of Memory Management in 8086</i>

Abstract — Microprocessor 8086 was the Foundation of the Evolutionary Development of the Processors we have today. It was the First Processor of it's time to support 16-bit processing and was the first to use Memory Segmentation to address more memory than a 16-bit address

can cover. This processor then became the Founder of the x86 Family which used the same Instruction Set Architectures developed by Intel for 8086. Thus, 8086 is the base of all the Microprocessors we have today. Understanding the working of it will make us capable of understanding the working of all the mainline x86 processors. This Application aims to help an Individual to understand the Interfacing of Memory Addresses in Microprocessor 8086. Interfacing is a topic hard to understand by just imagination. This, application helps an individual get to know how the Addresses Flow from 8086 to the Selected Chip and perform the Required Operations on Data at that Address in a Graphical Simulation. Graphical Reorientation helps one to understand things better than explaining in words. This allows the user to understand workflow in 8086 μ p and help to grasp a better knowledge.

Sr.No.	Paper ID	Title
78	107	Shilpa Gaikwad, Charushila Pawar, Ammu Striney, Trisha Ghosh <i>SENDING ALERT MESSAGE TO THE USER FOR CONTROLLING AND INTERACTING IN THE IOT ENVIRONMENT</i>

Abstract — To send an alert message before a tragedy occurs is one of the significant requirements in a particular environment. Casualties can cause human life and also loss of money. So, to overcome such casualties in an Internet of Things environment, an alert message can be set for the user. If the value crosses a particular threshold, a buzzer or an alert message should pop up so the person can take specific preventive measures to stop any significant tragedy. In this manuscript, Arduino programming language, which reads the potentiometer value, is used. If the value crosses a particular threshold, it shows a warning message to the Serial Monitor.

Sr.No.	Paper ID	Title
79	108	Prof. Anuradha Lumba, Prof. Suchetadevi Gaikwad, Prof. Snehal Mahajan, Prof. Pallavi Mahajan. <i>IoT Processing in Cloud for Healthcare</i>

Abstract — IoT (Internet of Things) processing in the cloud for healthcare has emerged as a transformative paradigm with the potential to revolutionize the healthcare industry. This innovative approach leverages IoT devices, cloud computing, and advanced data analytics to enhance patient care, improve healthcare operations, and drive medical research. This abstract provides an overview of the key aspects and implications of IoT processing in the cloud for healthcare. IoT devices such as wearable health trackers, medical sensors, and remote patient monitoring equipment are increasingly integrated into healthcare settings. These devices collect real-time patient data, including vital signs, activity levels, and treatment adherence, and transmit it securely to cloud-based platforms. In the cloud, this data undergoes rigorous processing and analysis, enabled by machine learning algorithms and AI technologies. The insights derived from this analysis empower healthcare providers with timely information, enabling early intervention and personalized care. Cloud computing offers scalability, cost-effectiveness, and data storage capabilities that are critical for handling the ever-growing volume of healthcare data. Furthermore, cloud-based solutions facilitate the seamless integration of IoT devices with existing healthcare IT systems, ensuring interoperability and efficient data flow. Despite the potential benefits, IoT processing in the cloud for healthcare

presents challenges, including data security, privacy concerns, ethical considerations, and compliance with healthcare regulations such as HIPAA and GDPR. These challenges underscore the importance of robust security measures, data anonymization, and strict adherence to regulatory standards to protect patient privacy and maintain trust in the technology. Looking forward, the future of IoT processing in the cloud for healthcare is promising. It encompasses advanced applications such as remote patient monitoring, AI powered diagnostics, telemedicine enhancements, and personalized medicine. Emerging technologies like 5G, edge computing, blockchain, and ethical AI will further shape the landscape of healthcare IoT, driving efficiency, accessibility, and innovation. In conclusion, IoT processing in the cloud for healthcare is poised to reshape the healthcare landscape, empowering healthcare providers, improving patient outcomes, and advancing medical research. While challenges persist, the potential for positive impact on healthcare delivery and patient well being is substantial, making this an area of ongoing innovation and exploration in the healthcare sector. Use of MQTT [7](Message Queuing Telemetry Transport) and AWS IoT (Amazon Web Services Internet of Things) has paved the way for more efficient and reliable solutions

Sr.No.	Paper ID	Title
80	109	Swapna Patil, Priyanka Mane. <i>Battlefield Awareness using IoT in Network Centric Warfare : Soldiers Health Integration for Enhanced Location Deployment (SHIELD) System</i>

Abstract — Data transmission during modern combat situations needs to be fast and reliable. At the same time, it should be able to support the rapidly changing requirements of Network Centric Warfare (NCW) and battlefield awareness. Battlefield awareness refers to the capability of military forces to collect, analyse, and comprehend real-time information on the battlefield which enables commanders to make well informed decisions. Soldiers being the most critical element on the battlefield, their fighting potential needs to be enhanced and their ability to provide valuable information about the battlefield should be explored. This paper presents a reliable and scalable implementation of an Internet of Things (IoT) architecture, specifically designed for monitoring soldiers' health and acquiring real-time battlefield data. The system, named Soldiers Health Integration for Enhanced Location Deployment (SHIELD), integrates a comprehensive range of biometric and environmental sensors. These sensors monitor not only the physiological parameters of the soldier but also critical aspects of the battlefield environment. Portable and designed for long-range functionality with low power consumption, the SHIELD system incorporates key IoT technologies and biometric sensors in a wearable device. This device facilitates seamless communication and data exchange between the soldier and a centralised command centre.

Sr.No.	Paper ID	Title
81	110	Amey Pandit, Shravani Jeurkar, Shubham Dhopat, Sakshi Jaiswal, Pranoti Nage. <i>A Comparative Analysis of Convolutional Neural Networks for Accurate Brain Tumor Detection</i>

Abstract — Brain tumours are a global health concern that require prompt and precise diagnosis in order to initiate successful therapy. The potential of convolutional neural networks (CNNs) increasing precision of brain tumour diagnosis and classification is investigated in this paper. Using MRI images, we assessed the effectiveness of nine popular CNN models for the categorization of brain tumours. This comparison study assists in determining the most effective model for accurate brain tumour identification, allowing medical practitioners and researchers to make more informed judgements in the field. For better patient outcomes and efficient medical intervention, brain tumour detection accuracy is essential. In order to accurately detect brain tumours, this paper provides a thorough comparative review of convolutional neural networks (CNNs). Variety of CNN models, such as VGG16, VGG19, Inception V3, InceptionResNetV2, ResNet50, ResNet50V2, ResNet101V2, MobileNetV2, and EfficientNetV2L, are evaluated in terms of how well they classify MRI images that show various brain tumour types, including glioblastoma, meningioma, and pituitary tumours. The assessment measures provide a thorough insight of each model's capabilities and include accuracy, precision, recall, and F1-score. The results provide insight on the advantages and disadvantages of various CNN topologies, which advances brain tumour detection techniques.

Sr.No.	Paper ID	Title
82	111	Sowmya Kini Prabhu, Gauri Vaidya <i>Battlefield Awareness using IoT in Network Centric Warfare : Soldiers Health Integration for Enhanced Location Deployment (SHIELD) System</i>

Abstract — Data transmission during modern combat situations needs to be fast and reliable. At the same time, it should be able to support the rapidly changing requirements of Network Centric Warfare (NCW) and battlefield awareness. Battlefield awareness refers to the capability of military forces to collect, analyse, and comprehend real-time information on the battlefield which enables commanders to make well informed decisions. Soldiers being the most critical element on the battlefield, their fighting potential needs to be enhanced and their ability to provide valuable information about the battlefield should be explored. This paper presents a reliable and scalable implementation of an Internet of Things (IoT) architecture, specifically designed for monitoring soldiers' health and acquiring real-time battlefield data. The system, named Soldiers Health Integration for Enhanced Location Deployment (SHIELD), integrates a comprehensive range of biometric and environmental sensors. These sensors monitor not only the physiological parameters of the soldier but also critical aspects of the battlefield environment. Portable and designed for long-range functionality with low power consumption, the SHIELD system incorporates key IoT technologies and biometric sensors in a wearable device. This device facilitates seamless communication and data exchange between the soldier and a centralised command centre.

Sr.No.	Paper ID	Title
83	112	Tanuj Sachin Phalke, Disha Santosh Solanki, Dr. Vivek Ramakrishnan. <i>IOT Based Baby Monitoring System</i>

Abstract — This design focuses on the development of an IoT- grounded baby monitoring system that enables parents to cover their baby's exertion and terrain ever. The system uses

detectors, microcontrollers, and pall- grounded software to collect and process data in real-time, furnishing parents with cautions and announcements when necessary. The design was successful in developing a functional prototype of demonstrating its eventuality for unborn development and perpetration. This design presents the design of a baby monitoring system grounded on the IoT protocol. A prototype will be developed that provides a dependable and effective baby covering system that can play a vital part in furnishing better child care. This system monitors vital parameters similar as body temperature, room temperature and moisture, humidity condition, and the weeping of a child and sends cautions. Using the IoT Server Cloud, this information is transferred to their parents. The system armature consists of detectors for covering vital parameters, an TV screen, and a sound buzzer, all controlled by a single ESP microcontroller.

Sr.No.	Paper ID	Title
84	113	Charushila Pawar, Shilpa Gaikwad, Trisha Ghosh, Ammu Striney <i>Data Mining Process and Algorithms</i>

Abstract — This review paper shows the various steps performed during the progress of data mining and data algorithms used to discover knowledge. Data mining is the process of extract hidden and useful patterns and information from data. It is a newest technology that helps businesses to predict future trends and behaviors, allowing them to make proactive, knowledge-driven decisions. The purpose of this paper is to explain the methods and algorithms of data mining and how it can help decision makers to made determination resolutions.

Sr.No.	Paper ID	Title
85	114	Prof. Renuka Nagpure, Prof. Divya Gajangi, Prof. Dhanashree Bhanushali. <i>A Study on Open Source Server Technologies</i>

Abstract — Open source technology (OST) is an often-misused term; too often, users often think open source is synonymous with free. With the relatively recent rise of the Internet's influence on production and development of software, open source has become a popular vehicle to gain widespread use and support of some very popular software titles. This study paper is to put forward 10 new technologies for open source servers that will compile a diverse list of projects and applications for developers to discover and explore. Many of these products are free of cost or close to it.

Sr.No.	Paper ID	Title
86	115	Keval Rathod, Mihir Rathod, Gaurav Redkar, Prajnesh Shetty, Prof. Jaya Nag Mathur <i>ARCHITEX: Interior Design using Augmented Reality</i>

Abstract — In an era characterized by constant technological innovation and a growing emphasis on user experience, augmented reality (AR) has emerged as a powerful tool for reshaping interior design. This abstract introduces a pioneering AR interior design application

built using Unity and the AR Foundation package, a tool that holds the promise of revolutionizing how we envision and interact with our living and working spaces. This visionary application transcends the traditional boundaries of interior design, offering a transformative approach that blurs the lines between the physical and the virtual, enabling users to creatively, efficiently, and personally design their interior spaces. The Unity AR Interior Design App takes full advantage of AR Foundation's capabilities, providing a unique platform for visualizing, manipulating, and personalizing interior spaces. It empowers users by allowing them to overlay virtual furniture, decorative items, and architectural elements onto their physical surroundings. The outcome is an instant visualization of design concepts within the context of their homes, offices, or commercial spaces. The key features of this groundbreaking app include an extensive library of meticulously designed 3D models, covering a wide array of furniture, decorative items, and architectural components. These models are finely crafted to deliver a lifelike representation, ensuring a seamless integration between the virtual and physical worlds. The user interface is designed with a focus on ease of use, allowing users to effortlessly select, move, rotate, and resize virtual objects, providing a hands-on approach to design exploration. One of the app's most notable features is real-time rendering, made possible through AR Foundation. This application represents a significant leap in the evolution of interior design technology. It empowers users to visualize and experiment with their design ideas, fostering creativity, practicality, and accessibility. This abstract offers a glimpse into the immense potential of AR technology and Unity's AR Foundation package, redefining the future of interior design with innovation, functionality, and convenience of our living and working environments.

Sr.No.	Paper ID	Title
87	116	Divya Gajangi, Renuka Nagpure, Sahil Gawli, Rohan Ingle <i>PATAPAY : Online Secure Payment Addressing System</i>

Abstract — A ground-breaking initiative called PataPay has the potential to completely transform online shopping. With e-commerce becoming more and more popular, accurate address entry at checkout is essential. In order to meet this requirement, PataPay streamlines the procedure and makes it quicker, safer, and easier to use. Fundamentally, PataPay gives customers a special and practical way to submit their address information when they shop online. Users can submit their phone number in place of tediously typing out their entire address. It guarantees that shipping information is quickly and accurately populated and is connected to their entire address.

In addition to saving time, this lowers the possibility of data entering errors. In the digital world, security is crucial. PataPay uses cutting-edge technology, like blockchain, to protect user data. User information is kept private and secure at all times thanks to encrypted transactions and strict security measures.

Sr.No.	Paper ID	Title
88	117	Rutuja Shinde Devyani Shingare Pradnya Tirlotkar, Deepali Vannam Prof. Jignesh Patel. <i>Smart Travel: A Collaborative and Content-Based Approach for Personalized Tourism</i>

Abstract — Machine learning recommender systems are used to create personalised tourism experiences by analysing user data such as preferences, behaviour, similarity to other users, etc. Few of the most popular machine learning recommendation systems are collaborative filtering as well as content-based. Hybrid systems are the combination of these two methods which are effective in providing more accurate recommendations. Smart Travel offers several advantages such as personalisation, convenience, and better user experience. Smart Travel uses machine learning algorithms trained on large datasets of tourist attractions, hotels, restaurants and users to create personalised recommendations. These recommendations can be tailored to match user preferences and previous behaviours, making trip planning easier. The Cosine similarity method uses similarity between different items and users. So it combines the results of the CB and CF filtering. This approach has yielded better results compared to the two methods separately. In this paper, we look at the various steps in the project and the data resources which can be utilised for creating a recommendation system. Finally, we look at how personalised recommendations play a role in the tourism sector

Sr.No.	Paper ID	Title
89	118	Nisha Ade, Apurva Ankushrao, Tanvi Kawle, Ruchika Jadhav, Prof. Ashwini Galiya <i>Virtual Kanban Board</i>

Abstract —Kanban is a well-known agile methodology that was first used in the production process of Toyota in the 1950s and subsequently expanded to other industries. Setting work-in-progress boundaries that are both effective and manageable presents a difficulty when implementing core practices, which emphasize efficiency. The essay makes the case that improving the link between replenishment value, resource capacity, and work-in-progress constraints is just as important for workflow optimization as meeting these limits. The goal of the Virtual Kanban Board Project is to transform project management by utilizing contemporary technology to develop a dynamic, user-friendly, and adaptable platform that draws inspiration from the Kanban approach. By providing a scalable and real-time solution for managing, visualizing, and optimizing operations, the project overcomes the drawbacks of physical boards.

Sr.No.	Paper ID	Title
90	120	Sakshi Patil, Amrita Panicker, Vaishali Mancheker, Mohan Lahane, Prof. Yogita Shelar. <i>Collab-Pro- A Project Repository</i>

Abstract — In the contemporary digital era, many academic scholars acquire proficiency in new technologies through digital channels, employing them creatively to generate novel solutions in their academic pursuits. Regrettably, these innovative systems often go unnoticed or are underutilized. Numerous diligent scholars invest time in mastering new technologies and applying them in inventive ways, with the potential to establish successful initiatives. Many successful startups today have originated from the endeavours of young minds. Our study has focused on collaboration software, leading us to propose the development of an Android platform tailored for university students. This platform aims to provide a space for students to showcase their innovative systems, gaining the recognition they deserve. Additionally, it serves as an educational resource, enabling peers to study the uploaded systems and offer constructive

feedback. The administrative features include the ability to authorize uploaded systems to prevent plagiarism. The Android application, developed using Java and supported by Android Studio ccx as the integrated development environment (IDE), stores and manages data on Google Firebase. The primary goal of this initiative is to create a dedicated platform that empowers scholars to display their creations, fostering public recognition. Simultaneously, it provides a gateway for recruiting companies to identify and consider talented individuals for further professional opportunities.

Sr.No.	Paper ID	Title
91	121	Shubham Dabhade, Kunal Mistry, Tejas Palyekar, Yojana Killedar, Dr. Suvarna Pansambal <i>Study of ML Algorithms for Student Performance</i>

Abstract — This research uses four machine learning techniques to predict students' performance in Educational Institutions. The study also examines the impact of internet usage and time spent on social networks on students' performance. The models were compared using ROC index performance measures and classification accuracy. Different measures were computed, including classification error, precision, recall, and F measure. The dataset used for building the models was collected from a student survey and grade book. This project has various technologies used such tools and frameworks, including Keras, Pandas, NumPy, TensorFlow, Matplotlib, Seaborn, Python, Google Colab, Dart language, and the Flutter framework; and also the algorithms used such as include Artificial Neural Network (ANN) and Linear Discriminant Analysis(LDA). This research signifies that the system also focuses on refining the curriculum to align with industry needs and supporting educators' professional development.

Sr.No.	Paper ID	Title
92	122	Antara Kangane, Riyaan Manesia, Vrushal Bhurkud, Prof.Mahendra Patil <i>YOLOv8: Personal Assistant for Seamless Object Detection</i>

Abstract — This work aims to introduce a new method for boosting the capabilities of intelligent personal assistants (IPAs) by integrating the advanced YOLOv8 (You Only Look Once version 8) object detection model. This approach revolves around a human-driven strategy to enhance user interaction and responsiveness through real-time and accurate object recognition. The proposed methodology is a promising solution for developers and researchers aiming to enhance IPA capabilities through a user-centric and expert-guided YOLOv8 integration process.

Sr.No.	Paper ID	Title
93	123	Akanksha Poriwade, Rohan Singh, Vedant Vartak, Aayush Waghchaure <i>SmartPDF</i>

Abstract — In a world immersed in an ever-expanding sea of textual information, the demand for an intuitive and dynamic approach to document interaction is paramount. Our project,

"SmartPDF," stands at the forefront of this digital transformation. SmartPDF harnesses the potent synergy of cutting-edge technologies, specifically natural language processing (NLP), Streamlit, and Langchain, to empower users to engage in insightful conversations with PDF documents. This breakthrough innovation transcends traditional document interfaces, heralding a new era of interactive and conversational document exploration. SmartPDF's architecture seamlessly melds the powers of NLP, Streamlit, and Langchain, offering users a seamless pathway to upload PDF documents and engage in real-time dialogues with the document's content. Through a user-friendly web interface, SmartPDF artfully extracts relevant textual passages, delivering succinct responses to user inquiries. The versatility of SmartPDF knows no bounds, extending its benefits to industries ranging from law and medicine to content management. This project embodies a pivotal step toward a future where documents cease to be static entities and transform into responsive, conversational companions.

Sr.No.	Paper ID	Title
94	124	Jyoti Jeetendra Gurav, Mahalaxmi Palinje, Dr. Jyoti Mali, Ankit Devgaonkar. <i>Literature review on Heart rate detection through deep learning method PPG and IPPG</i>

Abstract — Health monitoring is an important parameter to determine the health status of a person. Measuring the heart rate is an easy way to gauge patients' health. Normal heart rate may vary from person to person and a usually high or low resting heart rate can be a sign of concern. There are several methods for the measurement of heart rate monitoring such as ECG, oximeters etc. Such methods have some disadvantages that these are invasive and have a continuous contact with the human body. Remote health monitoring is the easiest and best alternative to avoid going out and getting infected. However, during the period of pandemic situations like Covid-19 where the viruses spread through physical contact and through air these traditional methods are risky and contagious. So, there is a great need for contactless heart rate measurement. This work targets to provide more accurate and effective approach of estimating contactless heart rate estimation from facial video sequences. Conventional steps include channel creation through Region of Interest (ROI) selection, followed by illumination rectification and filtering for heart signal detection. The novelty of this proposed work lies in two aspects. Instead of a single channel, multiple channel creation, like ECG, is targeted. This is expected to assure more reliable estimation of the HR. The multiple channel creation will be based on multiple ROI selection, as well, including the HR detection through micro movements of the head from the face video. Another novelty lies in the use of deep learning algorithms for the same. This is expected to assure better estimation accuracy. The work will be validated by performance comparison with the state-of-the-art solutions on the existing datasets.

Sr.No.	Paper ID	Title
95	125	Sarthak Shirsat, Manthan Maru, Akshit Solanki, Hitarth Kolhe, Dr. Jyoti Dange <i>GenioHub : AI Service Provider</i>

Abstract — GenioHub is a groundbreaking platform transforming access to advanced AI

services through seamless integration of cutting-edge models like OpenAI and GPT. It empowers a diverse user base, from developers to content creators and learners, with a wide array of AI-driven tools. GenioHub's core offering includes personalized chatbot experiences, enhancing customer support, engagement, and information retrieval. It excels in dynamic image generation, streamlining code creation, and enabling human-like text generation for various purposes. The platform's technical architecture ensures a responsive user experience, while its intuitive interface caters to users of all skill levels. GenioHub's real-world applications underscore its versatility and potential to drive innovation across industries, making it a visionary AI platform that enhances accessibility and usability. This comprehensive thesis delves into GenioHub's development process, technical infrastructure, and the integration of OpenAI and GPT models, emphasizing its transformative role in the realm of AI accessibility and utility.

Sr.No.	Paper ID	Title
96	126	Parshwa Shah, Ritik Yadav, Riddhi Tawde, Riya Shetty, Prof. Yogita Shelar <i>foodE - Culinary Tech Companion</i>

Abstract — foodE – Culinary Tech Companion is a cutting-edge recipe suggestion application that is designed to transform the way users discover and prepare meals. Homemakers often face the recurring challenge of deciding what to cook, while youngsters seek variety and new culinary experiences. Our app serves as a comprehensive solution to these common problems. This app leverages advanced machine learning algorithms and a vast database of recipes to offer personalized culinary recommendations based on individual preferences, dietary restrictions, and available ingredients. The main objective of the app is to simplify the cooking experience for users, regardless of their culinary expertise. The app's intuitive interface ensures a seamless user experience, making it accessible to both novice cooks and seasoned chefs. By understanding each user's unique taste preferences, dietary needs, and cooking proficiency, the app generates tailored recipe suggestions that cater to a wide range of palates and lifestyles. Users can purchase ingredients directly through the app, saving time and effort in meal preparation. The proposed solution provides daily notifications featuring carefully curated meal recommendations, and culinary exploration for those seeking novel culinary experiences, the app ensures a fresh dining adventure every day, and the app simplifies the cooking process with step-by-step instructions, ensuring that even novice cooks can confidently prepare gourmet meals with ease and other features include Integrated Ingredient Purchase and Personalized Recommendations by using collaborative filtering, content-based filtering, matrix factorization and deep learning models.

Sr.No.	Paper ID	Title
97	127	Chirayu Chawande, Pallavi Mandavka, Siddhi Tawde, Vaidehi Shivgan, Prof. Divya Gajangi <i>A Review on Text to Image Generation using Stable Diffusion</i>

Abstract — A tool which generates image from text prompt allows users to liberalize their imagination and explore new artistic possibilities. Content creators or artists can easily translate their imaginative ideas into visually impressive representations, which thus modernize the

artistry process. This project Text to Image Generator which utilizes the Stable Diffusion model to generate innovative images from the text description. In comparison with other text-to-image models, Stable Diffusion is simpler and more efficient and achieves better performance. By fusing Stable Diffusion, the project aims to ensure the stability and quality of produced images. The text-to-image synthesis in stable diffusion help to generate the realistic image of something that matches to the description provided by the user. The foremost target is to create a skilled and handy AI model that can develop incredibly detailed and innovative images from textual descriptions. A model that can translate textual input into immensely inventive images, representing upgrade in AI-driven content generation. The challenge is to create a powerful and flexible AI model that can precisely interpret textual prompt and develop images based on that textual description. The produced images should not only be diverse but also rich in artistry and originality. This will ultimately revolutionise the way visual content is formed and regulated across various domains.

Sr.No.	Paper ID	Title
98	128	Sameer Shaikh, Aman Wadia, Sanib Shaikh, Sushant Devre, Prof. Ashwini Gaikwad <i>SMART E-HEALTH CARD SYSTEM FOR HOSPITAL</i>

Abstract — Nowadays, in response to the evolving healthcare landscape, this paper presents our project on a Smart E-Health card system developed during our Computer Engineering program. Focused on applying programming skills, the project created a web application to streamline hospital management, reducing patient wait times, enhancing report traceability, and centralizing patient history data.

The Smart E-Health card system serves as a vital tool, contributing to the modernization of patient experiences and providing healthcare professionals with efficient access to essential information. The project aimed to address critical challenges in healthcare and align with the industry's evolving needs.

The web application, powered by innovative technologies, facilitates seamless data collection and management in hospitals, marking a significant advancement in healthcare processes. The project not only deepened our practical skills but also nurtured teamwork, management proficiency, and leadership abilities among project team members.

This paper delves into the technical aspects of our Smart E-Health card system, detailing its architecture, functionalities, and positive impact on hospital management. It reflects on our experiential journey, emphasizing the project's role in enhancing our understanding of software development challenges in healthcare.

Sr.No.	Paper ID	Title
99	129	Tanishka Borlikar, Aadil Khan, Swati Mishra, Abdul Rehman Momin <i>ChatStat Pro - A WhatsApp Chat Analyser</i>

Abstract — In an era defined by digital communication, WhatsApp stands out as the predominant and effective means of communication in contemporary times. WhatsApp stands as one of the most ubiquitous messaging platforms, facilitating countless conversations daily.

Within these chats lie a treasure trove of insights, sentiments, and patterns waiting to be discovered. WhatsApp chat analyser is the application which provide analysis of WhatsApp chats. This project is a combination of machine learning and NLP. This WhatsApp chat analyser takes a chat file which is imported from Whatsapp from user and analyses it and gives different visualizations as a result. This tool aims to offer a thorough study of the information that WhatsApp provides. Regardless of the subject around which the conversation is centred, our generated code may be used to improve comprehension of the data. These modules are employed to generate data frames, and the resulting graphs are displayed within the web application. Because this approach is effective and resource-conserving, it can be readily applied to the largest dataset. Real-time analysis adds a crucial dimension to this project, enabling users to glean instant insights from ongoing chats, whether for enhancing customer support, understanding market trends, or improving personal productivity. Privacy and ethical considerations are at the forefront, ensuring data security and user confidentiality. Ultimately, the WhatsApp Chat Analyser project embodies the fusion of cutting-edge technology and practical utility, offering a gateway to harness the latent potential within our digital conversations.

Sr.No.	Paper ID	Title
100	131	Vishal Sanap, Smit Shah, Soham Shahane, Krisha Pattani, Mahalaxmi Palinje <i>Optimizing Resource Allocation and Scheduling in Cloud-Based 3D Printing Environments</i>

Abstract — This study addresses the challenges associated with resource allocation and scheduling in cloud-based 3D printing environments. With a growing need for effective resource utilization and timely task completion, research focuses on optimizing workflows in these dynamic settings. A detailed plan has been introduced to use cloud computing to enhance resource allocation and simplify scheduling in 3D printing operations. The framework integrates algorithms to dynamically allocate resources based on the specific requirements of each printing job. The approach considers factors like machine availability, material availability, and machine capabilities to make informed decisions about resource allocation. This ensures optimal use and minimizes idle time. Furthermore, a smart scheduling mechanism is introduced to adapt to real-time changes, prioritize tasks, and minimize delays. The research outcomes contribute to advancing cloud-based 3D printing by enhancing efficiency, reducing costs, and overall improving productivity. The proposed framework offers a practical solution for industries aiming to maximize their 3D printing capabilities within a cloud computing infrastructure.

Sr.No.	Paper ID	Title
101	134	Dhruvesh Bandivadekar, Jay Gajora, Shivam Gupta, Prof. Mahendra Patil <i>Lane Detection and Tracking System for Autonomous Vehicles</i>

Abstract — The development of self-driving automobiles opens up fascinating new avenues for safer and more comfortable travel. Enhancing lane recognition and tracking, a critical component of autonomous vehicles, is the main goal of our study. Our system is capable of

accurately detecting and tracking lanes in real-time, especially under difficult circumstances such as poor weather or low illumination, thanks to the combination of powerful computer vision, sensor technology, and machine learning. We've developed both software and hardware components to ensure our system is adaptable and ready for use in real-world situations. Extensive testing has shown that our system is highly accurate and reliable, making it a valuable contribution to self-driving technology. In conclusion, our Lane Detection and Tracking System is a big step towards ensuring that autonomous vehicles are safer and more widely available.

Sr.No.	Paper ID	Title
102	135	Sagar Gawade, Shantanu Kadam, Prince Gupta, Harshal Hadal, Prof. Ashwini Kachare <i>Advance Air Canvas</i>

Abstract — The exploration of air writing, a captivating research realm within image processing and pattern recognition, has become increasingly challenging and intriguing. In recent years, this area has significantly influenced the automation process, elevating the synergy between humans and machines across diverse applications. Various research endeavors have concentrated on innovating techniques and methodologies to not only expedite processing but also enhance the accuracy of recognition.

Sr.No.	Paper ID	Title
103	136	Sapna Dutta, Dineshchandra Joshi, Taniket Waghia, Atithi Zimbar, Kavita Bani <i>RASPBERRY PI AND ARDUINO BASED OPEN SOURCE 3D LASER SCANNER</i>

Abstract — A 3D Scanner refers to creating a generalized and simplified representation of the functionality, data output and operation of 3D Scanner. It is often used in engineering, computer programs and various applications. The proposal of this project is to construct a scanner for scanning of smaller objects and visualizing them in a computer. 3D Scanners are commercially available using techniques like image processing, laser, etc. These techniques are high-resolution webcams and high end equipment like laser sources. They have good accuracy, but it is equally expensive. To optimize between price and accuracy, a distance sensor can be used for plotting points in 3D space. Algorithm which is used to create a mesh for the concept of point cloud, this mesh is written in the format ‘. STP file’ which is done by python coding language. In domains of CAD modeling ‘. STP file’ is a widely used format. Thus the object can either be viewed in any 3D printed or any CAD software.

Sr.No.	Paper ID	Title
104	137	Gaurang Kumbhar, Parth Hariyani, Kabir Jangir, Rahul Khunt, Deepali Maste <i>Online Mentoring Platform</i>

Abstract — Our platform is like a helpful guide for learning and growing online. When you sign up, you share basic info like email, password, and phone. Then, you create a profile with details about yourself—your interests, job, and more. We make talking easy with a messaging service for one-on-one chats and sharing photos, documents, and maybe even videos. In contrast to face-to-face interactions, the Online Mentoring System (OMS) employs asynchronous electronic communications to establish and nurture the mentor-mentee relationship through virtual means. Online Mentoring System is a Client-Server model, which acts as an Interface between mentor and mentee. Online Mentoring System strives to reduce the workload of students in entering their details and at the same time enable the Mentors to assess their students more efficiently.

Sr.No.	Paper ID	Title
105	138	Mohd Raza Moghul, Riddhesh Barve, Umesh Pal, Nadeem Shaikh, Kavita Bani <i>Contactless IOT Doorbell & Security System</i>

Abstract — The Contactless IoT Doorbell & Security System redefines home security through innovative IoT technology. With features like automatic visitor recognition, a voice-assisted interface, and real-time online alerts, the system provides a dynamic and responsive user experience. It leverages sensors, including PIR, for seamless visitor detection. The system's remote alarm activation and continuous outdoor monitoring enhance security, while its IoT integration allows global monitoring via mobile phones. This fully automated solution reflects a paradigm shift in home security, offering versatility and robustness in today's interconnected world. It is set up using a Raspberry Pi, Pi Camera, PIR Sensor, LED, Bread Board, Resistor, Connecting wires and power supply.

Sr.No.	Paper ID	Title
106	139	Sonia Fernandes, Natasha Naik <i>IOT based advances in Healthcare: A survey</i>

Abstract — The integration of Internet of Things (IoT) technology in the healthcare sector has emerged as a transformative force, revolutionizing the way patient care is delivered and managed. This paper explores the manifold applications of IoT in healthcare, highlighting its potential to optimize medical processes, improve patient outcomes, and enhance overall efficiency within the healthcare ecosystem.

Sr.No.	Paper ID	Title
107	140	Devraj Bhatade, Dhaval Chandra, Shashank Kota, Divya Makwana, Prof. Akshata Patil <i>AI WORKOUT ASSISTANT & FITNESS GUIDE</i>

Abstract — As a branch of artificial intelligence (AI), machine learning focuses on developing models and algorithms that enable computers to extract knowledge and produce predictions or judgments based on data analysis. Its core involves creating systems that can automatically

improve how well they perform or understand a task via experience learning—all without the need for explicit programming. When it comes to artificial intelligence-based workout support, machine learning is critical. Machine learning's power is demonstrated in the real-time workout form evaluation project, where its methods are essential. These techniques are carefully applied to achieve accurate pose estimation, which allows the system to identify important body parts when performing exercises. By utilizing machine learning, the system surpasses simple explicit programming and demonstrates the ability to make generalizations based on past data. ML algorithms analyze the pose data to assess users' exercise form, providing real-time feedback by measuring joint angles, body alignment, and other metrics. The system customizes its recommendations based on individual user characteristics and fitness goals, ensuring personalized guidance. ML also contributes to anomaly detection for user safety and processes data for performance analysis. Scalability and continuous improvement are achieved through ML, while the system can even offer personalized workout recommendations.

Sr.No.	Paper ID	Title
108	141	Siddharth Tayade, Devesh Nikam, Shyam Thakur, Adarsh Tripathi Prof. Shweta Sharma <i>BLOCKCHAIN BASED IAM SYSTEM IN HEALTHCARE (MEDI-BLOCK)</i>

Abstract — Systems for Identity and Access Management (IAM) are essential to any kind of information system, including those used in healthcare. Attackers target healthcare applications because of the sensitive nature and large number of health data they contain. As a result, IAM systems for the healthcare industry must be developed to exacting requirements and on solid foundations. A popular emerging technology for creating decentralized identity and access management systems is blockchain (BC). Despite the recent focus on the integration of BC in healthcare to propose IAM solutions, BC is a developing technology and should be thoroughly examined before employing it for IAM solutions in healthcare applications. To look into the security element, a thorough review of the literature on BC-based IAM systems in healthcare applications was done. This review comprised twenty-four studies that met the inclusion criteria and passed the quality assessment. For the purpose of investigating the IAM system design, security needs, and threats, we looked at BC-based solutions in healthcare applications.

Sr.No.	Paper ID	Title
109	142	Rahul Sarvaiya, Viraj Gavas, Aditi Changan, Suchetadevi Gaikwad <i>IOT BASED MOBILE CHARGING USING SOLAR POWER</i>

Abstract — In today's rapidly evolving technological landscape, the fusion of the Internet of Things (IoT) and renewable energy sources has paved the way for innovative and sustainable solutions. One such groundbreaking application is the "IoTbased Mobile Charging with Solar Energy." This cutting-edge system harnesses the power of solar energy to revolutionize the way we charge our mobile devices, offering not only convenience but also a significant step towards reducing our carbon footprint. Imagine a world where your mobile device is seamlessly charged by the sun's rays, regardless of your location. This revolutionary concept leverages IoT technology to intelligently manage and optimize the charging process, ensuring efficient energy

utilization and a seamless user experience. By integrating solar panels, energy storage solutions, and smart charging algorithms, our system aims to provide a sustainable and eco-friendly solution for our evergrowing energy needs. Our system offers a decentralized and scalable solution, providing energy access to a wider population while maximizing the efficient use of available resources. System Integrates solar energy with IoT technology which helps alleviate the strain on existing energy infrastructure, reducing the risk of power shortages and grid instability during peak demand. Our system uses RFID to authenticate users and show the charging balance period of charging.

Sr.No.	Paper ID	Title
110	143	Narayan Parab, Amey Tari, Vatsal Vaidhya, Vishal Yadav, Jyoti Dange <i>Electronic Health Record</i>

Abstract — The Electronic Health Records system is an innovative platform designed using blockchain where the patient can have the power to securely manage, access, and share their medical records at their discretion. EHR provides an innovative solution that leverages blockchain technology, specifically Ethereum and Solidity smart contracts, to develop a robust and decentralized EHR system. Our blockchain-based EHR system empowers users to securely store and manage their health records while ensuring data privacy and integrity. Through the use of cryptographic keys and immutable smart contracts, patients gain control over who accesses their health information, thereby preserving confidentiality and enabling consent-based data sharing. EHR system extends beyond record-keeping, offering a telemedicine component that allows users to consult with healthcare professionals remotely. Smart contracts facilitate seamless, secure, and transparent interactions between patients and doctors, enhancing the overall quality of healthcare delivery. Furthermore, the fusion of blockchain technology, Ethereum, Solidity, and smart contracts in this EHR system signifies a transformative step forward in healthcare data management and telemedicine. The system not only empowers patients with control over their health data but also enhances the efficiency and security of healthcare services, ultimately advancing the quality of patient care in the digital age.

Sr.No.	Paper ID	Title
111	144	Sejal Gavali, Sahil Gaikwad, Shreyash Veer, Yamika Machhi, Prof. Anuradha Kapoor <i>PlaceMATE</i>

Abstract — The system automates traditional training and placement management, serving as an application for Training and Placement Officers. It empowers them to efficiently handle student information for placements and offer assistance through a portal. Students can post queries, update personal and educational details, upload resumes, and access placement preparation materials via a dedicated login. The portal includes a Company Tab for companies to shortlist eligible students, reducing manual work, paperwork, and time consumption. This model enhances the role of placement cells by identifying and improving students' technical and interpersonal skills, aiming to boost academic performance and increase placement opportunities.

Sr.No.	Paper	Title
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	ID	
112	145	Tanmay Halde, Varun Hatkar, Akash Jagdale, Prasham Jain, Yogita Shelar <i>Healthcare Chat Bot System</i>

Abstract — Accessibility and communication are key in a world where healthcare is highly. The aim of this study is to introduce a chat bot system that is user-friendly and can help bridge healthcare service gaps. We are working towards providing a quick and easy-to-use solution for urgent healthcare information due to the increasing demand. "Our healthcare chat bot utilizes intelligent technology to provide tailored medical data and appointments, as well as timely medication reminders. Machine learning is being used by the system to improve response accuracy by analyzing medical data and user interactions. Our rigorous evaluation of the product involved both healthcare providers and end-users. The findings indicate that improved healthcare information access, high user satisfaction, and more efficient appointment management are the main outcomes. The chat bot can be integrated with current healthcare systems, making it a simple process to implement. This study underscores the potential of this technology to enhance healthcare accessibility and empower patients. The significance of these types of innovations in today's healthcare landscape lies in their ability to simplify communication and contribute to a more efficient patient experience.

Sr.No.	Paper ID	Title
113	146	Aarnav Sangekar, Hitanshu Oza, Fatima Khan, Vaishnavi Jadhav, Charmi Chaniyara <i>Combat Sports Tutoring using XR</i>

Abstract — Combat sports, such as boxing, mixed martial arts (MMA), judo, and wrestling, demand a unique combination of physical prowess, strategic thinking, and split-second decision-making. As athletes strive for excellence in these disciplines, they often face challenges in accessing high-quality coaching, personalized feedback, and varied training scenarios. Moreover, the traditional approaches to combat sports training can sometimes fall short in effectively simulating real-life situations and understanding opponents' movements. To address these limitations, we propose a novel approach that harnesses the potential of AR and VR to create an innovative and engaging training platform. Our system uses Unity 3D for the Game Engine, and the Oculus Quest 2 for the Head Mounted Display (HMD).

Sr.No.	Paper ID	Title
114	147	Sanya Shaikh, Atharv Shirke, Simran Singh, Dr. Jyoti Mali <i>"JEEVAN" – Your Personal Health Assistant</i>

Abstract — In the rapidly advancing realm of healthcare, the proliferation of Internet of Things (IoT) technology has given rise to transformative solutions. This project introduces an innovative approach by exploring the development and deployment of IoT-based Medical Health Assistants, designed to significantly enhance remote health monitoring and emergency response. These multifunctional devices continuously monitor vital parameters such as heart

rate, pulses, Spo2, and body temperature in real-time. In the event of a medical emergency, such as a patient experiencing fatigue or weakness, these devices employ alert systems, including auditory signals like buzzers, to promptly notify relevant parties. This proactive strategy ensures the swift identification and response to potential health risks, minimizing the time gap between critical health indicator detection and the arrival of emergency medical services. This paper emphasizes the concrete outcomes and developments in the field of Internet of Things-based medical health assistants, going beyond simple study and findings. It evaluates their proven talents, benefits, drawbacks, and likelihood of being widely used in healthcare environments. The study also explores the gadgets' subsequent effects on patients and medical personnel, illuminating the revolutionary conclusions drawn from the data.

Sr.No.	Paper ID	Title
115	148	Yash Jagani, Amogh Gade, Siddhesh Khatavkar, Pravin Khatke, Prof. Bhavna Arora <i>Strategic Business Intelligence: Building a Machine Learning-Driven Finance Dashboard</i>

Abstract — This work aims to develop a robust finance dashboard application from scratch. Combining Material-UI, Vite, and Recharts on the front end, and Express.js with MongoDB on the back end, our system offers a comprehensive solution for business data management. The application incorporates diverse chart representations, intuitive tables, and predictive modeling through Regression.js. This fusion of data analytics and machine learning empowers users to gain valuable insights into their financial data. The implementation showcases a seamless blend of cutting-edge technologies, providing a user-friendly and efficient platform for businesses to monitor and predict key performance indicators.

Sr.No.	Paper ID	Title
116	149	Priyanka Sulakhe, Chaitanya Kolte, Sameer Katakounde <i>OPTIMIZING PRODUCTION THROUGH TOTAL PRODUCTIVE MAINTENANCE: A COMPREHENSIVE STUDY</i>

Abstract — This study aims to explore the competitive advantages that manufacturers derive from the effective implementation of Total Productive Maintenance (TPM) methodologies. The primary focus of this study is the effects of strategically applying Total Product Quality Management (TPM), particularly the Keikaku-Hozen (KH) Pillar actions, to address breakdown concerns in an Indian manufacturing firm. The paper carefully examines the challenges that India's manufacturing industry faces, particularly with regard to processing specialized machining processes and minimizing downtime caused by maintenance issues. The study employs a scientific approach, applying Root Cause Analysis (RCA) to discover and address the underlying causes of maintenance issues that result in prolonged downtime in Indian enterprises.

Sr.No.	Paper ID	Title
117	150	Aniket Sharma, Samiksha Palande, Neel Kotnis, Gautam Suvarna, Prof.

		Shweta Sharma <i>Blockchain based Anonymity</i>
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Abstract — Blockchain technology has revolutionized various industries by offering transparency, immutability, and decentralization. However, the inherent transparency of most blockchain systems poses significant challenges to user privacy. This paper presents an in-depth exploration of anonymity-based blockchain systems, which aim to address these privacy concerns while preserving the core benefits of distributed ledger technology. The paper begins by providing a comprehensive overview of the fundamental principles of blockchain technology and the importance of privacy in blockchain networks. It then delves into the various privacy-preserving techniques employed in anonymity-based blockchain systems, including cryptographic primitives such as zero-knowledge proofs, ring signatures, and confidential transactions. Furthermore, the paper discusses the key advantages and limitations of anonymity-based blockchain systems, considering aspects like scalability, efficiency, and usability. It also presents a comparative analysis of prominent anonymity-focused blockchain projects, highlighting their unique features and use cases. It discusses the potential impact of these systems on enhancing user privacy, reducing fraud, and fostering trust in various domains. By striking a balance between privacy and transparency, anonymity-based blockchain systems offer a promising avenue for the future of secure and private decentralized applications.

Sr.No.	Paper ID	Title
118	151	Mohit Gaikwad, Niyati Gohil, Shaina Katoch, Tarun Bingi, Suchetadevi Gaikwad <i>Cyclone Intensity Estimation</i>

Abstract — Tropical cyclone intensity estimation is critical for disaster forecasting and severe weather warning. In recent years, the performance of various TC intensity estimation models has been gradually enhanced, but the accuracy still needs to be improved. In this, we explore the application of Convolutional Neural Networks (CNNs) to estimate cyclone intensity using half-hourly INSAT-3D IR images. The aim is to create an automated system that can reliably predict cyclone intensity and by focusing on deep learning, the goal is to revolutionize cyclone intensity estimation, enabling timely and accurate predictions. The impact of climate change on cyclone intensity has been a significant scientific concern for several decades. Despite theoretical frameworks and models indicating a potential increase in the strength of tropical cyclones in a warming climate, uncertainties persist in both assessing and projecting the responses of tropical cyclone intensity to climate change. While some comprehensive reviews have previously addressed the overall influence of climate change on tropical cyclone activity, encompassing aspects such as intensity, this particular review is focused on deepening our understanding of the effect of climate change on basin-wide tropical cyclone intensity. It specifically delves into the examination of indices relevant to basin-wide tropical cyclone intensity, explores historical datasets utilized for detecting intensity trends, and involves simulations to better comprehend the dynamics of tropical cyclone intensity changes in response to climate variations.

Sr.No.	Paper ID	Title
119	152	Shivam Pol, Akhil Nambiar. Ketan Singh, Saud Shaikh, Suchetadevi

		Gaikwad <i>Web Based Salary Census Prediction using Efficient Supervised Machine Learning Algorithms</i>
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Abstract — The starting point of this article is to find a suitable method of salary prediction to find a job. Firstly, this paper will introduce the content and usage of different regression models in machine learning. After understanding the methodology that will be used, it is pointed out that the goal of this study is to find the correlation between the salaries of employees and different influencing factors, and this paper investigates the predictive capabilities of Random Forest and Logistic Regression models in the context of salary censuses. In today's dynamic workforce, understanding and predicting salary levels are crucial for effective human resource management. Leveraging traditional statistical methods like Logistic Regression and ensemble learning techniques with Random Forest and XgBoost, our study employs a diverse dataset encompassing various industries and occupations. The objective is to compare the performance, strengths, and weaknesses of these models for predicting salary levels. This research contributes valuable insights to the field of salary prediction, aiding organizations in making informed decisions about compensation structures and navigating the intricacies of a competitive job market.

Sr.No.	Paper ID	Title
120	153	Abhip Kumar Singh, Vaibhav Chaudhari, Aakash Parab, Sanket Pati, Jaya Nag Mathur <i>Agriconnect</i>

Abstract — Agriculture in India is a crucial segment for the country's development and economic growth. Three main segments are required for crop growth: choosing suitable fertilizers, selecting crops based on the region's climate, and knowing crop prices. This paper includes three models for each of these segments: Fertilizer predictor, crop predictor, and future crop price predictor. Fertilizer predictor predicts suitable fertilizers for soil constituents, crop predictor predicts the most favourable crops which might grow on the basis of climate conditions, and future crop price predictor predicts future crop prices on the basis of past historical data and rates.

Sr.No.	Paper ID	Title
121	154	Kashyap Goswami, Babu Gupta, Harsh Pal, Shivam Dave, Charmi Chaniyara <i>Smart Shopping</i>

Abstract — Price comparison sites are designed to compare the price of goods and services from a range of providers, which will help consumers in making decisions to choose products that will save their money online. Considering the customers' busy lifestyle, especially those who are living in the city area, most of the consumers prefer to buy their needs through the internet because it saves their time. Besides, consumers always go for the cheaper price in purchasing products therefore by using a price comparison website, customers don't have to travel from shop to shop only to survey the price offered by different shops for the same product. They can just check it from the price comparison website itself and decide where they should buy the products they need. The best deals will be clearly highlighted. Even though not all

consumers are buying online, but it is one of the ways to help consumers increase their price awareness. Consumers have the right to know whether the price they are seeing in the shops are good deals as it is claimed or not.

Sr.No.	Paper ID	Title
122	155	Aryan Sawant, Bobby Patel, Pavan Patil, Madhur Rane, Prof. Bhavna Arora <i>Animal Intrusion In Farm Using AI</i>

Abstract — In modern agriculture, the challenge of mitigating animal intrusions poses a significant threat to farm productivity and sustainability. This paper presents an innovative approach leveraging artificial intelligence (AI) and computer vision techniques to address this critical issue. Our AI-based animal intrusion detection system employs a network of strategically placed cameras equipped with advanced image recognition algorithms. These algorithms are trained to recognize and differentiate between various types of animals, including mammals and birds, that may pose a threat to crops and livestock. Through real-time monitoring and analysis of captured imagery, the system can accurately detect and classify animal intrusions with high precision. This research not only offers a practical solution to the pressing issue of animal intrusions but also contributes to the broader fields of precision agriculture and AI-driven wildlife conservation.

Sr.No.	Paper ID	Title
123	156	Aman Ansari, Gargi Chavan, Sneha Chavan, Sarika Gadhawe, Anuradha Kapoor <i>Animal Welfare And Care</i>

Abstract — This paper presents "Animal Welfare and Care," an innovative website designed to solve all pet animal problems. It will contain options for adoption and giving of pets, donations of food, medicines, and money for animal welfare. Arrange veterinarian and rescue teams for injured stray animals. The main attraction of the website is the eco-brick house for stray animals. It will have contacts with organizations that make small ecobrick houses, which will provide shelter for stray animals. People can provide them with eco-bricks and take a small step towards animal welfare as well as plastic management. The main objective of this project is to automate the process of serving the welfare of the animals by giving the abandoned pets a place of shelter and caring for them with affection. To provide a case for working towards the welfare of abandoned, stray, lost, or surrendered pets. Furthermore, the Animal Welfare and Care website prioritizes direct communication between the user or donor and service providers, minimizing delays and uncertainties. The inclusion of instant notifications keeps users informed about service availability and communication updates.

Sr.No.	Paper ID	Title
124	157	Kaushik Gudalka, Ashwajit Hosmani, Siddhi Tawde, Aryan Anvekar, Prof. Sangeeta Kotecha <i>BRUSHLESS DC MOTOR CONTROL USING PWM</i>

Abstract — Brushless Direct Current (BLDC) motors have rapidly gained popularity in residential applications owing to their exceptional characteristics, including high efficiency, elevated power density, and minimal maintenance requirements. Their noiseless operation, compact design, and reliability have also led to widespread deployment across various sectors, including industries and household appliances. Despite their advantages, controlling the speed of BLDC motors poses challenges compared to other motor types in the industry. In this context, our objective is to devise an advanced, user-friendly, and cost-effective system. Initially, we plan to manually control the BLDC motor speed using a Variac or Regulator. Subsequently, our approach involves utilizing Arduino, ultrasonic sensors, and PWM techniques for digital control. This method treats the BLDC motor as a digital system, employing two predefined state variables to regulate speed. The simplicity of the controller's design and implementation is intended to reduce both cost and complexity in motor control hardware.

Sr.No.	Paper ID	Title
125	158	Nupur Bhalekar, Anoushka Bhandary, Sejal Chahande, Swati Bhatt, Prof. Bhavna Arora <i>ACCIDENT DETECTION AND ALERT SYSTEM</i>

Abstract — This work aims to address the critical issue of delayed medical assistance caused by factors such as traffic congestion and ambulance unavailability, for that an Accident Detection and Alert App has been developed. This app uses smartphone sensors to swiftly identifies accident sites and triggers automatic alerts to emergency services and nearby individuals. Given the increasing demand for quick action in cities, this app is quite pertinent, as it minimizes the amount of time that passes between an accident and the delivery of emergency medical care, which is ultimately critical in reducing the number of road fatalities.

Sr.No.	Paper ID	Title
126	159	Shubham Gaikwad, Pratik Pawar, Bhavesh Nandedkar, Arpita Kini, Prof. Garima Gurja <i>IOT Based Health Monitoring System</i>

Abstract — In the modern world, Internet of Things (IoT) devices are becoming increasingly helpful. IoT devices are growing in number in the modern period, and this has a significant effect on healthcare. It may decrease medical care costs and enable early health problem detection. A patient who requires round-the-clock monitoring must have access to a healthcare monitoring system. A person's vital health metrics can always be tracked by an Internet of Things-based health monitoring system. In an emergency, it can assist patients by offering prompt medical advice from a doctor who is located far away. Internet of Things (IoT) gadgets are become more and more useful in today's environment. In the present era, the number of IoT devices is increasing, and this has a significant effect on healthcare. It might make early health problem detection possible and minimize the cost of medical care. A healthcare monitoring system must be accessible to a patient who needs 24-hour supervision. An Internet of Things-based health monitoring system can always keep tabs on an individual's critical health parameters. It can help people in an emergency by offering fast medical advice from a distant doctor.

Sr.No.	Paper ID	Title
127	160	Kamaljit Kaur, Dr. Sudhanshu Dubey, Dr. Saurabh Rana <i>New advances in smart grid technology: Prospects for the system that supplies electricity in the future</i>

Abstract — The rising demand for electrical energy driven by technological advancements has presented challenges in the distribution and production of electricity. This has created an increasing necessity for improved security, reliability, efficiency, and a focus on environmental sustainability in power grid operations. In response, the Smart Grid (SG) has emerged as a solution, integrating modern Information and Communications Technologies (ICT) with the electrical distribution network to deliver a dependable, efficient, sustainable, and environmentally friendly energy supply. The SG enables bidirectional transmission of both energy and information, opening the door to more intelligent approaches to electricity production, distribution, and consumption. This article delves into the dynamic landscape of Smart Grid technology, exploring its features and various applications in the electricity distribution sector.

Sr.No.	Paper ID	Title
128	162	Dhruv Jitendra Patel, Bhoomika Santosh Singh, Prof.Mahendra Patil <i>OptiEnergi: AI-Driven Industrial Energy Optimization</i>

Abstract — “OptiEnergi” includes realtime monitoring, predictive analysis and process control. The system collects realtime energy data from various sources such as sensors and meters and use this data to predict energy consumption patterns and identify energy saving opportunities. The aim is to create an energy management system based on artificial intelligence to help companies reduce energy costs, increase operational efficiency and use energy effectively. The system, powered by artificial intelligence, will constantly monitor energy consumption patterns and help reduce energy waste and costs by providing suggestions for energy saving practices. The system will help companies contribute to the future by reducing energy waste. This helps companies meet their environmental goals and responsibilities, such as carbon reduction commitments. The findings show that it is possible to increase business efficiency, reduce costs and promote sustainable energy use.

Sr.No.	Paper ID	Title
129	164	Pranav Jagtap, Rahul Epili, Parth Bandiwadekar, Shweta Jalgaonkar, Prof. Ashwini Gaikwad <i>Decentralized Social Media with NFT Marketplace</i>

Abstract — This project explores the integration of decentralized social media with a marketplace for non-fungible tokens (NFTs). By utilizing blockchain technology, users can have greater control over their data and content, ensuring enhanced privacy and security. The NFT marketplace introduces unique digital assets, allowing users to tokenize and trade exclusive content. This innovative approach aims to redefine social media dynamics, fostering user empowerment and ownership in the digital space.

Sr.No.	Paper ID	Title
130	165	Purvi Agarwal, Swikruti Dongaonkar, Shriya Salunkhe <i>An Overview on Data Cleaning using Python</i>
<p>Abstract — Now a day's data plays an important role in all fields. Industries have to deal with immense data. Decisions taken due to improper and incorrect data will determine the future of the organisation. The data collected is inaccurate. It will have many issues such as duplication, missing values, spelling mistakes. Improper data may lead to incorrect conclusion; thus, data cleaning plays an important role before analysing and reaching to any kind of conclusion. This paper explores various techniques for cleaning the data using python. Data cleaning techniques using Python is the most efficient as compared to other traditional methods.</p>		
Sr.No.	Paper ID	Title
131	166	Aditya Pal, Ashutosh Patil, Piyush Pal, Kishan Prajapati, Renuka Nagpure <i>Blockchain based Book-Exchange</i>
<p>Abstract — Trust and transparency are paramount in the digital era. The process of exchanging books with people you meet on the internet always carries the risk of repudiation of origin. In a digital age where trust and transparency are at a premium, blockchain emerges as a game-changer. Blockchain provides a decentralized, tamper tamper-proof ledger which can help to foster trust by creating a secure and transparent ecosystem. With blockchain, every book exchange becomes a verifiable transaction, recorded permanently on the ledger. Users can confidently trade books, knowing that ownership history is beyond dispute. Smart contracts are self - executing agreements that automate and enforce book exchanges. By eliminating intermediaries and establishing a trust layer, smart contracts play a pivotal role in enhancing security, accountability, and efficiency within our book exchange platform. To facilitate the development and testing of these smart contracts, we've integrated Ganache, a local Ethereum blockchain emulator. Ganache streamlines the development process by providing a lightweight and customizable local blockchain environment, ensuring that our platform's smart contracts function seamlessly. The Truffle Suite complements our local blockchain network development by offering a suite of tools that simplifies smart contract development and deployment. Our project aims to provide users with secure, cost-effective, and transparent book exchanges by harnessing blockchain's transformative power and utilizing tools like Ganache and Truffle Suite.</p>		
Sr.No.	Paper ID	Title
132	167	Swikruti Dongaonkar, Purvi Agarwal, Shriya Salunkhe <i>Study of Marketplace sentiment analysis in Ecommerce era using Python</i>
<p>Abstract — The swift rise in utilization of online services, like social media and e-commerce websites, has resulted in reviews and comments about daily activities. The practice of collecting</p>		

and examining opinions, views of people, and perceptions about various products, and services is called sentiment analysis. Companies, governments, and individuals can all benefit from these opinions while gathering data and formulating their own ideas for decisions. The process of sentiment research and evaluation is not without its difficulties, though. The aim of this paper is to review some papers related to the research in sentiment analysis or customer review analysis on marketplace detailing the concepts and techniques used, as well as outlining a broader approach based on Python.

Sr.No.	Paper ID	Title
133	168	Mahendra Yadav, Siddhesh Nikam, Shivam Patel, Shreya Nambiar, Dr. Ulhaskumar Gokhale <i>Decentralized Art Marketplace with NFTs</i>

Abstract — An NFT (Non-Fungible Token) art marketplace is a digital platform where artists, collectors, and investors can buy, sell, and trade unique digital assets known as NFTs, which represent ownership or proof of authenticity of digital art or other digital creations. An NFT art marketplace works by allowing artists to tokenize their digital creations as NFTs, which represent ownership and authenticity. Users can then buy, sell, and trade these NFTs on the platform using cryptocurrency. Smart contracts on the blockchain automate transactions and royalties for artists. Ownership is transparently recorded on the blockchain, and social features foster a community of artists and collectors. Blockchain is used in NFT art marketplaces to create unique and secure digital assets (NFTs), record ownership and transaction history transparently, enable automatic and secure transactions via smart contracts, verify authenticity and provenance of digital art, ensure artists receive royalties on secondary sales and foster trust and transparency in the marketplace. Cryptocurrency is used in NFT art marketplaces for buying, selling, and trading NFTs. Users use cryptocurrencies like Ethereum to purchase NFTs, and smart contracts on the blockchain facilitate secure and automated transactions, ensuring transparency and trust. Smart contracts in NFT art marketplaces are used to automate and secure various aspects of transactions such as Ownership Transfer, Payment Processing, Royalties and Immutable Roles. Ownership Transfer is when a buyer purchases an NFT, the smart contract automatically transfers ownership from the seller to the buyer. Smart contracts handle cryptocurrency payments, ensuring secure and instant transactions upon purchase. Smart Contracts enforce royalty payments to creators on secondary sales, distributing a percentage of the sale price as agreed. Smart contracts execute predefined rules without the need for intermediaries, ensuring transparency and trust in NFT transactions. An NFT art marketplace is a decentralized and digitized ecosystem that empowers artists and collectors while leveraging blockchain technology to ensure the uniqueness and provenance of digital art and assets. It represents a fundamental shift in how we perceive and trade digital creations in the modern era. NFT art marketplaces are needed in the modern world to establish ownership, monetize digital art, and provide transparency, trust, and economic opportunities in an increasingly digital and decentralized creative landscape.

Sr.No.	Paper ID	Title
134	169	Dipa Patel, Dr. Pravin Nemade, Dr. Bhushan Sonawane and Dr. Abhilasha Saini

		<i>A Short Overview of Diverse Analytical Methods for Material and Chemical Evaluation</i>
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Abstract — A significant and practical branch of science, analytical chemistry employs a range of tools and techniques to gather, separate, examine, and quantify distinct chemical, inorganic, and biological substances. This multidisciplinary field draws from chemistry as well as biology, physics, pharmaceuticals, and several technological fields. It covers the fundamentals of both qualitative and quantitative analysis, as well as thermal and electroanalytical techniques and spectrochemical procedures. Analytes are identified through qualitative analysis, and the concentration or quantity of the molecules under investigation is ascertained through quantitative analysis.

Sr.No.	Paper ID	Title
135	170	Shriya Salunkhe, Purvi Agarwal, Swikruti Dongaonkar <i>An Overview of Blockchain Technology</i>

Abstract — A blockchain is a type of distributed ledger or database that is accessible to all nodes in a computer network. Its use cases extend beyond cryptocurrency, but it is best known for its central role in securing and decentralizing transactions within cryptocurrency systems. Any sector can leverage blockchain technology to ensure the immutability of data. This document offers a comprehensive examination of blockchain technology, beginning with an overview of its architecture and key characteristics. Additionally, it briefly outlines recent applications.

Sr.No.	Paper ID	Title
136	171	Raj Patil, Hetansh Mer, Gautam Mishra, Ulhaskumar Gokhale <i>AI Based Exam Proctoring System</i>

Abstract — This project report introduces an Online Proctoring System designed to maintain the integrity of online assessments by leveraging advanced technologies. The system utilizes a fusion of artificial intelligence, machine learning, and computer vision methodologies to supervise and enhance the security of online examinations. Key functionalities include real-time video monitoring of test takers, facial recognition, eye-tracking, and behaviour analysis to detect any suspicious activities. Moreover, the system incorporates biometric authentication methods to verify the identity of the test-taker. The project also emphasizes the importance of balancing security with privacy, as it respects the test-taker's rights and ensures data protection through robust encryption and access control mechanisms. The Online Proctoring System not only minimizes cheating but also reduces the administrative burden on educators by automating the proctoring process, allowing for scalable and efficient online assessments. This report provides insights into the system's architecture, algorithms, implementation, and a discussion of ethical considerations. In an era of remote learning, the Online Proctoring System is a vital tool for maintaining academic integrity and trust in online education. This report serves as a comprehensive guide for educators, institutions, and technologists interested in the development and deployment of effective online proctoring solutions.

Sr.No.	Paper ID	Title
137	172	Yuvraj Bagul, Sanket Rajam, Pruthvi Jadhav, Ambar Bhosle, Prof. Sangeeta Kotecha <i>Smart UV-based Sanitizing Dispenser</i>
<p>Abstract — Research suggests that the incidents occurred due to unhygienic use of equipment in operation theatre in medical fields has increased in past few years. To tackle this exacerbation of incidents, this project is developed. This project is a sanitizing box which uses UV to sanitize the equipment kept in it and also dish it out whenever in need through voice recognition. If the equipment is missing for longer than it should, it would also alarm the user/owner of the box. This project is not only restricted to medical fields but also can be used for other wide casual applications.</p>		
Sr.No.	Paper ID	Title
138	173	Gaurang Vaidya, Omkar Zende, Nupur Dalvi, Darshan Kuchekar <i>Energy Management Unit</i>
<p>Abstract — Every electrical system requires power as a supply. Each has a power rating, and the quantity of energy used to complete the work is specified. In industries, exceeding the contracted electricity use might result in significant penalties. A maximum demand meter's main objective is to track and restrict peak electrical consumption in order to reduce monthly electricity costs. The user has no need to worry about paying high bill amounts or about the electricity bill going up when they use the meter. All users, but especially industries, can benefit from maximum power demand meters. Society can gain from the expertise and information that went into making the meter. These capabilities enable consumers to proactively change their energy use habits, avoiding peak demand prices and complying with utility agreements.</p>		
Sr.No.	Paper ID	Title
139	174	Ashritha Dinakar Kothari, Isha Vikrant Gaonkar, Sakshi Tushar Kadam, Prof. Ashwini Kachare <i>Supportive Assistant Keeping Hope Intact (SAKHI)</i>
<p>Abstract — Depression is a pervasive and complicated mental fitness challenge affecting tens of millions internationally. It manifests as continual emotions of sadness, hopelessness, and a lack of hobby in lifestyle's pleasures. The stigma surrounding despair frequently deters people from seeking assistance, even as constrained get right of entry to mental fitness offerings compounds the problem. Spotting the pressing need for a complete and empathetic answer, we introduce "SAKHI" (Supportive Assistant Keeping Hope Intact). The "SAKHI" anti-melancholy internet app is a transformative solution designed to locate and reply to the feelings, textual content, and voice of individuals grappling with despair. It offers personalized assistance, network engagement, and professional integration to combat isolation and stigma. "SAKHI" pursuits to foster desire, resilience, and well-being, ushering in a new generation of mental health help.</p>		

Sr.No.	Paper ID	Title
140	175	Rushikesh Jadhav, Shlok Chauhan, Aditya Dhage, Yatharth Bajare, Prof. Mahendra Patil <i>PersonaPro: A Novel Personality Prediction Platform</i>

Abstract — The "PersonaPro" is a user-friendly platform that provides insights into an individual's personality through the integration of personality assessment tools like the Big Five Personality Model and the Myers-Briggs Type Indicator. The website uses machine learning and data analytics to interpret user responses, offering personalized recommendations for self-improvement, career choices, and interpersonal relationships. It also provides in-depth analyses of strengths and areas for development, enabling users to make informed decisions. The project aims to empower users to embrace self-discovery, foster personal growth, and make informed life choices based on their unique personalities.

Sr.No.	Paper ID	Title
141	176	Akshata Kakulte, Abhinesh Yadav, Swapnil Gorde, Sonu More, Prof. Pragya jain <i>Penalty Minimization Using Automatic Power Factor Control</i>

Abstract — Any power system that makes use of AC power evaluates efficiency using power factor [range 0,1] which can be defined as the ratio of real power to apparent power. Graphically, the power factor is the phase difference between voltage and current waveforms. In an ideal system, for the power factor to be unity, voltage, and current waveforms need to be in phase with each other. A poor power factor, usually 0.8 or less, results in increased losses as well as penalties to the consumer using equipment at such a low power factor. It is advised to use a power factor corrector that brings up the PF as close to unity as possible. This can be done by either adding capacitance to the system to compensate for the lagging pf and also by correcting distorted waves and adding filters to reduce harmonics.

The proposed project makes use of a capacitor bank to compensate for the phase difference caused by an inductive load. The idea is to make use of a correlation coefficient-based algorithm to modify the already existing IC-relay-capacitor bank circuit and eliminate problems that exist in this circuit.

Sr.No.	Paper ID	Title
142	177	Prem Sangle, Abhishek Goykar, Omkar Sawant, Pratham Tank, Prof. Ashwini Kachare <i>Toxic Comment Analyzer</i>

Abstract — The "Toxic Comment Analyzer" project is an innovative initiative designed to tackle the escalating issue of online toxicity and harassment. Using advanced deep learning techniques, the platform enables users to input comments for analysis, predicting whether they contain toxic content based on diverse parameters. As online toxicity becomes a pressing concern in the digital age, the project's focus on automatic toxicity detection using machine

learning models is pivotal. The analysis covers various dimensions, including publication history, datasets, evaluation metrics, machine learning techniques, toxicity types, and comment languages. The surge in online negativity, especially impacting educational institutions during the era of essential online learning, emphasizes the urgency of addressing online bullying and harassment. This research, utilizing Kaggle's toxic comment dataset, categorizes comments into toxicity classes, providing valuable insights and introducing a deep learning-based gradio application as a practical solution to combat online toxicity and foster respectful online engagement. Keywords: Online toxicity, deep learning, machine learning, automatic moderation, Kaggle dataset, educational impact, gradio application.

Sr.No.	Paper ID	Title
143	178	Amrit Suthar, Pratik Madnaik, Vinita Pingle, Shamitha Naik, Deepali Maste <i>Peer to Peer Car Pooling</i>

Abstract — Carpooling, also known as ride sharing and lift sharing, refers to car sharing in which many people travel in a single car. With the increase in the number of vehicles on the roads, people living all over the country, especially in major cities, are starting to face increasing traffic problems that can add up to an hour to daily travel times. Car sharing is seen as a greener and safer way to travel as it reduces carbon emissions, road congestion and the need for parking. It will show the time required to achieve a particular goal. This article examines the different methods researchers use in ride sharing. The transparency of the application we will use will help provide its users with a safe and reliable way of car sharing. It provides a better way to display cars and provides beautiful and easy-to-use.

Sr.No.	Paper ID	Title
144	179	Vedant Dandge, Sahil Bhatt, Pranav Trivedi, Aryan Chavan, Dr. Jyoti Dange <i>Automated Help Centers</i>

Abstract — In the ever-evolving landscape of customer support, the integration of Generative AI technology has emerged as a transformative solution to address the persistent challenges faced by traditional help centers. This major project endeavors to design and implement a cutting-edge Generative AI-powered automated help center, poised to revolutionize customer support operations. The primary objectives of this endeavor are to overcome resource limitations, minimize response times, maintain unwavering consistency, and reduce operational costs to enhance the overall customer experience.

Sr.No.	Paper ID	Title
145	180	Chaitanya Sawant, Dr. Poonam Kadam <i>Design, Simulation and Implementation of 32-bit ALU using Xilinx Vivado Suite and Artix 7 FPGA</i>

Abstract — The proposed paper deals with the designing and implementation of an Arithmetic Logic Unit - ALU of a general CPU. The designed ALU performs base operations like taking binary inputs, executing the operation, and creating, storing, and distributing binary output. The

ALU and its pre-requisite digital circuits are designed using Very High-Speed Integrated Circuit (VHSIC) Hardware Description Language (VHDL). ALU of digital computers aims at utilizing logic design algorithms to efficiently utilize the hardware. Various individual aspects of the ALU were designed and tested first and were later linked together to form a single powerful ALU with 32 discrete functions. In order to test the designed ALU, various testbench programs were developed to provide stimulus and verify responses. In this paper, we have simulated and synthesized a 32-bit ALU in Xilinx Vivado 2023. A scaled down version of the mentioned ALU is implemented on Arty A7 FPGA board housing the Artix 7 FPGA by Digilent.

Sr.No.	Paper ID	Title
146	181	Harshali Bagale, Aditya Gupta, Shivalal Gupta, Prashant Sable, Prof. Sangeeta Kotecha <i>SensiGuide: The Smart Blind Stick</i>

Abstract — Navigating urban environments poses significant challenges for visually impaired individuals, impeding their quest for self sufficiency. The issues typically arise when one is trying to find a way through congested streets and marketplaces, walking on ramps, moving up stairs, and a variety of other scenarios. To get where they're going, one needs to ask for directions. They deal with greater challenges on a daily basis. The struggle lies in the inadequacy of the systems to cater to the unique safety and mobility concerns specific to the visually impaired within dynamic settings. The urgency to tackle the challenges faced by the visually impaired stems from a broader commitment to fostering a more inclusive and accessible urban environment. The study contributes to the development of innovative solutions that prioritize user safety and independence, recognizing the multifaceted problems that hinder self- sufficiency for visually impaired individuals in their daily lives. These difficulties are sparking interest in finding different approaches to solving them. This exploration delves into the application of advanced ultrasonic sensor technology, aiming to address the distinct problems faced by visually impaired individuals in navigating their surroundings. By providing real-time obstacle detection, the study seeks to alleviate the hurdles that hinder their independence. Unlike conventional solutions, this article endeavors to offer a more versatile and reliable tool for enhanced navigation. We provide an overview of all the research publications that discuss various approaches to developing a blind stick that is more portable, affordable, user-friendly by using 3D printing technology, along with sensors such as IR, and ultrasonic sensors as well as GPS. This overview paper presents a comparison and summary of all approaches.

Sr.No.	Paper ID	Title
147	183	Snehal Andhare, Dr. Sunil Wankhade <i>Plant disease identification through image feature extraction technique using MATLAB</i>

Abstract — Identifying plant diseases involves investigating various aspects of farming, like organic farming, ongoing plant observation, and illness detection. Plant diseases are difficult to manually track on farms that grow completely different crops. This calls for a significant investment of time, a great deal of labor, and knowledge of plant diseases. Accurate disease prediction may be achieved by image processing, complex neural network techniques, and k-

means clustering. Image segmentation, data pre-processing, image fragmentation, feature detection, and recognition are some of the techniques used in the disease diagnosis process. This paper has involved the processing of images using feature extraction techniques.

Sr.No.	Paper ID	Title
148	185	Parag Arun Ahirrao, Rohit Bhakare, Saikrushna Goli, Gautamkrishna Chinta, Anuradha Kapoor <i>Agricure: AI-Driven Precision Farming - Unifying Crop Science, Fertilization Strategies, Pest Management, and Soil Health Analytics</i>

Abstract — Agricure is a revolutionary web platform designed exclusively for farmers, aimed at enhancing agricultural productivity through data-driven decisionmaking. In a world where soil degradation and suboptimal crop selection pose significant challenges, Agricure leverages cutting-edge machine learning (ML) models to provide realtime crop recommendations. One of Agricure's key features is its Crop Recommendation module, which acts as a guiding beacon for farmers. It assists them in selecting the most suitable crops for their land, reducing the risk of soil degradation and optimizing agricultural output. This intuitive tool simplifies the decision-making process and minimizes the uncertainties that farmers often face. For those farmers who prefer to maintain their existing crops but seek to maximize their potential, Agricure offers the Fertilizer Prediction feature. By analyzing nutrient requirements specific to the selected crop and the soil's nutrient profile, Agricure recommends precise fertilizer formulas comprising Nitrogen (N), Phosphorus (P), and Potassium (K). This personalized approach ensures efficient resource utilization and promotes sustainable farming practices. In the battle against agricultural pests, Agricure stands as a formidable ally with its Pesticide Recommendation module. Farmers can simply upload images of pests affecting their crops, and Agricure's deep learning (DL) model, powered by Convolutional Neural Networks (CNNs), swiftly identifies the pest species. Based on this identification, Agricure provides tailored recommendations for pesticides and dosage levels, offering an effective and ecofriendly solution to protect crops. Recognizing the common challenge faced by farmers who await government soil test results, Agricure bridges the knowledge gap by serving as the next logical step. With a user-friendly interface, Agricure equips farmers with insights into their crops' requirements, fostering better-informed decisions and sustainable agricultural practices.

Sr.No.	Paper ID	Title
149	186	Siddhant Kedar, Pranjali Raval, Amogh Worlikar, Sarika Galphade, Pratibha Dumane, Satish Chavan <i>Evaluating the Effectiveness of Machine Learning Models for Early Diagnosis of Chronic Kidney Disease</i>

Abstract — Chronic Kidney Disease (CKD) is one of the most arising as concerning health issues among many others due to the gradual damaging of the kidney, causing it to slowly reduce its ability to perform essential and fundamental functions of the body. It tends to go undetected in the early stages. The early detection and prediction of Kidney diseases becomes extremely helpful in such cases for diagnosing the problem. A Glomerular Filtration Rate (GFR) is an evaluation test that is used to check functioning of kidney. Based on the different GFR ratios, the severity of kidney disease can be diagnosed. The performance Assessment

using ML Models for early prediction of kidney disease is a system designed by assessing and evaluating the attributes provided to the system. The system utilizes Logistic regression, Support Vector Machine, Random Forest, and Decision Tree Algorithms for the assessment. This study proposes using ML to diagnose the Kidney disease. The mentioned algorithms were trained using the data gathered with different attributes.

Sr.No.	Paper ID	Title
150	187	Shree Agrawal, Shruti Balekar, Kushal Lohiya, Prof. Shweta Sharma, Prof. Pranali Bhusare <i>Advanced Car Parking Booking System</i>

Abstract — The Online Car Parking Booking System is a web-based solution designed to streamline and enhance the process of reserving parking spaces in urban environments. With the ever-increasing number of vehicles on the road, efficient management of parking resources has become a critical need. This system aims to provide a user-friendly and efficient platform for both parking facility operators and vehicle owners to reserve, track, and manage parking spaces. The concise overview in this paper aims to provide a snapshot of the Advanced Car Parking Booking System's functionalities, emphasizing its potential impact on improving the efficiency of urban parking management.

Sr.No.	Paper ID	Title
151	188	Ankush Tripathi, Smit Sardhara, Venus Solanki, Arnav Paraye, Prof. Akansha Patil <i>Detectify – Human detection system using ML</i>

Abstract — Efficient and accurate object detection is a crucial aspect of computer vision systems. Deep learning techniques have significantly increased the accuracy of object detection. This project aims to achieve high accuracy with real-time performance by incorporating state-of-the-art techniques for object detection. One major challenge in many object detection systems is their dependency on other computer vision techniques, which can lead to slow and non-optimal performance. This project uses a completely deep learning-based approach to solve the problem of object detection in an end-to-end fashion. The network is trained on the most challenging publicly available dataset, on which an object detection challenge is conducted annually. The resulting system is fast and accurate, making it useful for applications that require object detection. Maintaining proper posture has become increasingly important in today's sedentary lifestyle. Poor posture can lead to several musculoskeletal issues, including back pain, neck pain, and repetitive strain injuries. To address this issue, we present an innovative project focused on developing a Human Posture Detection System. Our non-intrusive and cost-effective solution can assist individuals in monitoring and correcting their posture. We use cutting edge computer vision and machine learning techniques to accurately analyse and classify human postures. The system captures real-time data using a combination of cameras and sensors and provides instant feedback to users about their posture. Our Human Posture Detection System is designed to benefit a wide range of individuals, from office workers to those recovering from injuries or managing postural-related health issues. By promoting proper posture, our project aims to enhance overall health, productivity, and quality of life for users.

Sr.No.	Paper ID	Title
152	189	Nivedita panda, Dhruv Modi, Faria sheikh, Vedant More, Renuka Nagpure <i>AI generated Image detection:</i>

Abstract — The emergence of artificial intelligence (AI) has transformed a number of fields, with significant progress made in image identification, one crucial application. This work presents a novel method of picture recognition with artificial intelligence (AI)-generated models, with a particular emphasis on the application of cutting-edge methods and algorithms. Our study examines the relationship between generative models and image identification, providing a thorough examination of the advantages and difficulties of this novel approach. We start by giving a summary of the essential ideas, such as the underlying theories of artificial intelligence (AI)-generated images and how they might improve the precision and effectiveness of image recognition systems. The study then explores the approaches used, emphasizing the incorporation of state-of-the-art methods such generative adversarial networks. Transfer learning and variation auto encoders for gans. By using these techniques, artificial images are produced that efficiently supplement the training datasets used by image detection models.

Sr.No.	Paper ID	Title
153	190	Sakthibala Danapal,Prajakta Borole,Ranjith Kumar K,Tushar Surwadka <i>Multi-objective approach for Optimal positioning of sectionalizers in distribution network using Ant colony optimization</i>

Abstract — This paper proposes a method to enhance client service reliability in medium voltage (MV) power distribution systems by strategically placing sectionalizers. Considering the impact of distributed generation, it emphasizes sectionalizers' role in improving reliability, configuration management, and network reconfiguration. Formulating the switch placement as a fuzzy multi-objective optimization task, the goal is to minimize sectionalizing switch costs while enhancing system dependability. Employing the Ant Colony Optimization algorithm, simulations on the Billiton system's bus 4 distribution network using MATLAB validate the method's effectiveness in handling the fuzzy multi-objective optimization challenge.

Sr.No.	Paper ID	Title
154	192	Aparna Shukla, Vinayak Ashok Sawant, Divya Acharya <i>Application of Galois Extensions</i>

Abstract — This paper explores the fundamental concepts of Galois theory and their implications on understanding the structure and properties of splitting fields. Galois theory provides criteria for identifying when a polynomial equation can be solved using radicals. It explores the deep relationship between Reed-Solomon codes and Galois extensions, exploring the fundamental symmetries displayed by field extensions and their role in polynomial factorization. It serves as a link between coding theory and field theory.

Sr.No.	Paper ID	Title
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155	193	Mitesh Dhodhi, Naitik Trivedi, Eknath Phad, Shreyah Pangerkar <i>VEHICLE CONTROL SYSTEM USING CAN PROTOCOL AND NODE RED</i>
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Abstract — This research paper explores the integration of Controller Area Network (CAN) protocol in the communication system of a semi-autonomous vehicle, with a focus on enhancing the driver-vehicle interface and incorporating advanced features. The project employs an Arduino-based data acquisition system utilizing ADC to convert analog control data into a digital format, visualized through an LCD. The CAN communication module ensures efficient data transfer and facilitates feedback on critical vehicle conditions such as speed and engine temperature. Notably, the study extends beyond the automotive domain, demonstrating the versatility of CAN protocol in diverse applications. Furthermore, the research leverages Node-RED software to create a dynamic dashboard, enabling real-time monitoring and implementing notifications and alerts for the system.

Sr.No.	Paper ID	Title
156	194	Dr. Abhishek Kakade, Prof. (Dr.) S. B. Kulkarni <i>Electrochemical Properties of Magnetic Supercapacitor Co_{0.9}Ni_{0.1}Fe₂O₄ Electrode Prepared by Hydrothermal Method</i>

Abstract — In the present work, Co_{0.9}Ni_{0.1}Fe₂O₄ (CNFO) is synthesized by hydrothermal method. After annealing the resulting Co_{0.9}Ni_{0.1}Fe₂O₄ electrode at 300°C, it is evaluated using a variety of methods, including scanning electron microscopy (SEM) for morphological investigations and X-ray diffraction (XRD) for structural studies. Single-phase cubic with Fd-3m space group of spinel structure was confirmed by structural analysis. The produced CNFO electrode's electrochemical characteristics, such as Cyclic Voltammetry (CV) and Galvanostatic Charge-Discharge (GCD), are investigated using an electrolyte solution of 1 M KOH. Cyclic voltammetry (CV) revealed the highest specific capacitance of 87.49 F/g at a 5 mV/s scan rate. Electrochemical stability of CNFO electrode is studied using cyclic voltammetry for 500 cycles.

Sr.No.	Paper ID	Title
157	195	Dr. Rajendra Mahajan, Dr.D.D. Girase, Dr. Balaji Shinde, Shobha D'mello <i>Questioning 'Family': A Study of Dina Mehta's Getting Away with Murder and Marsha Norman's Getting Out</i>

Abstract — Family means the bond, commitment, love, sacrifice, affinity and dwelling together. People in a family are connected and concerned with each other. Happiness of a family depends on the happiness of each and every member of the family. Without care, love, equality and commitment no family becomes heaven on earth. The existence of man and woman is important in a happy family; both are integral parts of the family. But throughout history women are treated as subordinates in any part of the world. But throughout history women are treated as subordinates in any part of the world. Women go through multilayers of oppressions and most of the time these oppressions start from the family. The aim of present study is to find the role of family in exploitation of women characters in Dina Mehta's *Getting Away with Murder* and Marsha Norman's *Getting Out*. Patriarchal agents in the society use various institutions to

exploit women and continue their dominance. This paper reveals different types of violence used by family members to subjugate the women characters.

Sr.No.	Paper ID	Title
158	196	Shobha D'mello, Dr. Rajendra Mahajan Dr. Balaji Shinde <i>Plagiarism: A Menace to the Academics</i>

Abstract — Writing is the representation of one's thoughts and opinions. Ethical writing comprises one's own writing. The foundation of scholarly communication is academic writing, which serves as a tool for providing information, knowledge dissemination, the expansion of critical thinking skills, and rational advancement. The notion of academic honesty is of utmost significance in this domain. The basic tenets of scholarly discourse are put in danger by plagiarism, the contrast of academic integrity. This article explores the negative effects of plagiarism on a student's academic writing career, looking at broader academic, professional, and personal ramifications that go beyond personal ethics.

Sr.No.	Paper ID	Title
159	197	Dr. Balaji Shinde, Dr. Rajendra Mahajan, Shobha D'mello <i>Institutional Preparedness to Implement NEP -2020 with special reference to Atharva College of Engineering, Mumbai</i>

Abstract — Education plays an important role in the success of every individual. It gives proper direction to our journey towards a goal sharpening our skills and different aspects of our personality. Education helps us to be confident and skilful to face any kind of challenges and overcome the obstacles in our way of life. Knowledge in one particular field is not sufficient to sustain in this competitive world. We need to enhance our capabilities and potential by adopting a multidisciplinary approach. Government is keeping all these important aspects in mind and targeting to implement NEP 2020 in curriculum to strengthen the backbone of education. NEP 2020 is a roadmap to restructure the present education system and develop the qualitative and skillful resources to achieve the dream of new India. Atharva College of Engineering, Mumbai has proactively initiated to implement the NEP 2020. This paper highlights the efforts taken at Atharva College of Engineering to implement NEP 2020 and gives exposure to the students to escalate their knowledge and skills.

Sr.No.	Paper ID	Title
160	198	Vinay Yadav, Manas Pathak, Atharva Wadekar, Ayush Singh, Dr. Jyoti Mali <i>Smart vehicle Anti-theft with remote engine locking system application</i>

Abstract — A central theme of this paper is the in-depth exploration of remote engine locking systems, which constitute a pivotal component of contemporary vehicle security. We delve into the various methodologies and technologies that underpin remote engine locking, including smartphone apps, GPS tracking, and IoT connectivity. The paper also analysis the market trends and the adoption rate of smart vehicle anti-theft systems, shedding light on the potential for further advancements and integration with autonomous and connected vehicle technologies. In

a world defined by constant evolution, the battle against vehicle theft demands agile and adaptable solutions. By marrying real-time sensor monitoring with secure remote control and robust security features, Smart vehicle anti-theft stands as a testament to innovative and user-centric security solutions in the era of connected cars. Its potential to significantly reduce vehicle theft rates and offer unparalleled peace of mind to drivers cannot be overstated. As Smart vehicle anti-theft control system continues its development and refinement, it promises to pave the way for a safer tomorrow, where the joy of driving is unburdened by the fear of falling victim to theft.

Sr.No.	Paper ID	Title
161	199	Dr. Bhushan Sonawane, Dr. Pravin Nemade, Dr. Priyanka Badani, Mrs.Dipa Patel <i>Water treatment by combined filter and various methods of filtration</i>

Abstract — Water demand technology gradually increasing with rapid development of social economy, due to this water pollution problem also increasing and it became more severe, to overcome this, technology of sewage treatment is developing rapidly, but it is with various problems .For advanced technology, energy consumption is more, carbon neutrality cost is very high so it is again dangerous, so it is today's need to develop low carbon sewage treatment technology which may consume less energy and less pollution release in environment. Hence it is today's need to focus on conventional sewage treatment technology and low carbon sewage treatment. It is expected to give theoretical basis for practical engineering application LCST (low carbon sewage treatment) which may reach the carbon neutrality goal by comparison and analysis of LCST. The human population explosion has also put a stress on the need for food, clothing and shelter. Shelter requires more land which is the biggest problem in the cities.

Sr.No.	Paper ID	Title
162	200	Shubh Jani, Abhishek Jani Kaushal Darji, Deepali Maste <i>In-Depth Exploration: implementing MLP from scratch</i>

Abstract — Multi-layer perceptrons (MLPs) are feedforward artificial neural networks utilized in supervised learning for tasks like classification and regression. Although frameworks such as TensorFlow simplify MLP construction, implementing one from scratch provides invaluable insights. This project created an MLP for binary classification without relying on specialized libraries. Implemented in Python using numpy for mathematical operations, the network comprises an input layer, a hidden layer with a sigmoid activation function, and an output layer. Random weight initialization and backpropagation were employed for training, with dropout for regularization. Training on a binary dataset for handwritten digit recognition showcased core MLP components: forward and backward propagation, weight updates, and regularization. Debugging without library assistance provided valuable experience, culminating in a successful MLP implementation from basic neural network math and Python. This project serves as a practical exercise, enhancing understanding of the internal workings of fundamental deep learning models.

Sr.No.	Paper ID	Title
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163	201	Shivam Dubey, Ruchita Rajmane, Leksha Revankar, Kanishk Singh, Prof. Pranoti Nage <i>Breast Cancer Classification using Neural Network</i>
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Abstract — Breast cancer is a prevalent and complex disease characterized by the uncontrolled growth of abnormal cells within the breast tissue. It is the most common cancer diagnosed in women worldwide, but it can also affect men. The etiology of breast cancer involves a combination of genetic, hormonal, and environmental factors. The disease presents in various forms, including ductal and lobular carcinomas, each with distinct subtypes. Early detection remains crucial for successful treatment, highlighting the significance of regular screening through mammography and clinical breast examinations. This paper includes the usage of Deep Learning techniques like RNN (Recurrent Neural Networks) to effectively detect the presence of cancer and classify it into either benign or malignant.

Sr.No.	Paper ID	Title
164	202	Srushti Hinge, Aaditya Phatak, Bhagyadeep Pawaskar, Ria Kokate, Prof. Yogita Shelar <i>Enhancing Natural Language Understanding Models with Research Paper Injection for Advanced Querying</i>

Abstract — This research paper delves into the innovative intersection of natural language understanding models and scholarly research by proposing a novel approach to augmenting large language models (LLMs) with curated research papers. As the capabilities of LLMs, such as ChatGPT, continue to advance, there is a growing need to empower these models with access to structured and specialized knowledge. In this study, we present a framework for injecting research papers into LLMs, thereby enriching their understanding and response generation capabilities. The methodology involves curating a diverse dataset of scholarly articles from various domains and integrating them seamlessly into the training process of LLMs. The incorporation of research papers aims to imbue the model with a deeper comprehension of specialized topics, enabling more accurate and contextually relevant responses during user queries. Our research explores the impact of research paper injection on the performance of LLMs in terms of information retrieval, coherence, and domain-specific understanding. Through rigorous experimentation and evaluation, we demonstrate the potential of this approach to significantly enhance the query resolution capabilities of LLMs in comparison to their non-augmented counterparts. Furthermore, we address challenges related to bias, credibility, and information overload inherent in research papers, proposing strategies to mitigate these concerns and ensure the responsible deployment of augmented LLMs. This work contributes to the broader discourse on leveraging structured knowledge to advance the capabilities of natural language understanding models and paves the way for future research in the domain of human-machine interaction.

Sr.No.	Paper ID	Title
165	203	Charmi Chaniyara, Pranoti Nage, Ulhaskumar Gokhale, Jyoti Dange <i>A survey on Automatic Disease Detection using AI ML techniques</i>

Abstract — Machine Learning and Deep learning techniques are playing vital role in early detection of disease. Advancement in the CNN algorithms with the help of image processing

and segmentation techniques with computer aided disease diagnosis have become the most important method for doctors as a helping tool for early disease detection. This paper survey's different diseases classification techniques based on pattern recognition, segmentation and lesion detection in medical imaging domain. Paper mainly survey on diabetic retinopathy, breast cancer and COVID detection using computer Aided Diagnosis and gives overview on algorithms, datasets, imaging modalities and current trends and opportunities.

Sr.No.	Paper ID	Title
166	204	Bhavesh Choudhary, Siddhi Dhainje, Karishma Avhad, Aman Chourasia, Charmi Chaniyara <i>Forensic Face Sketch Construction and Recognition</i>

Abstract — In the realm of computer systems, face reconstruction holds immense significance and finds applications in various domains such as forensics, entertainment, and healthcare. This article presents a novel approach to face reconstruction by leveraging sketches and deep learning techniques. Our methodology involves training a neural network with drawings created by human artists to generate a lifelike 3D representation of a face. The key advantage of our method lies in its ability to achieve precise and efficient face reconstruction without the requirement of complex 3D scanning equipment or extensive manual labor. To enhance the robustness and accuracy of the model, we employ deep learning techniques like convolutional neural networks (CNNs) and generative adversarial networks (GANs), along with data augmentation techniques such as rotation, scaling, and translation of the input sketches. Additionally, we incorporate prior knowledge about facial anatomy and features to guide the reconstruction process.

Sr.No.	Paper ID	Title
167	205	Pragya Jain, Ashweni KumarJain <i>SUSTAINABILITY–OPPORTUNITIES FOR ELECTRICITY UTILITIES IN INDIA</i>

Abstract — Known Mankind's history is hardly 7000 years old as compared to earth which is more than 4.5 billion years old. During the last 260 years post industrial revolution, earth's environment has deteriorated to a limit wherein reversal from unprecedented adverse effects of Global warming is getting nearly impossible. During the Paris Agreement in 2015, World leaders advocated limiting global warming to less than 1.5 Deg C by the end of the 21st century. The United Nations has made many efforts to curb global warming including defining the 17 sustainability development goals (SDG). These goals are defined with a perspective to survive the present without compromising the future. This technical paper discusses various opportunities available with Electricity Utilities vis a vis SDG goals and various avenues available in Industry 5.0 to complement the diverse efforts to be taken.

Sr.No.	Paper ID	Title
168	206	Prof. Prajakta Pawar, Prof. Dhanashree Pannase, Prof. Ruchi Chauhan, Prof. Shikha Malik <i>AR in medicine is an emerging technology</i>

Abstract — An AR technology’s interactive example called augmented reality adds computer-generated perceptual data to the physical world. Augmented reality is the process of superimposing digital content such as apps, software, and hardware like AR onto actual locations and things. AR helps to improve the experience, augmented reality overlays a virtual. For example the popular mobile game, where players explore their actual neighborhoods in pursuit of animated figures that appear on their phones or tablets.

Sr.No.	Paper ID	Title
169	207	Mrs. R. Sarala, Shunmugha Krishnan G. S., Mohamed Imran Khan <i>Patient’s surveillance system using IoT</i>

Abstract — There have been several attempts to use the new technology in various fields to improve the quality of life as a result of technological advancement and the shrinking of sensors. Since the last ten years, the healthcare monitoring system has evolved into one of the most important systems and has become more technologically focused. Unexpected deaths from a variety of ailments are an issue that affects people, and it is caused by a lack of timely medical attention for patients. The main objective is to create an IoT-based patient surveillance system that would assist healthcare providers in keeping track of their patients. An IoT-based integrated healthcare system can monitor this both in hospitals and at patients' homes to provide improved patient care. Medical professionals or caregivers can remotely access patient data to monitor health improvements from locations outside the hospital. The application of Internet of Things (IoT) principles has been widespread in connecting available medical resources, offering patients intelligent, reliable, and efficient healthcare. This project has introduced a specially designed IoT architecture tailored for healthcare applications. Therefore, the suggested design gathers the sensor data using an Arduino microcontroller and transmits it to the cloud where it is processed and examined before being displayed. In the event of an emergency, patients' actions based on the health data analysis can be sent back to the doctor or nurses via messaging.

Sr.No.	Paper ID	Title
170	208	Pranoti Nage, Charmi Chaniyara, Ulhaskumar Gokhale, Jyoti Dange <i>Artificial Intelligence in Ophthalmic Disease Screening</i>

Abstract — Artificial intelligence has significantly advanced in the field of ophthalmology, particularly in the prevention of vision loss associated with various eye ailments. Rapid progress has been observed in the development of artificial intelligence applications dedicated to preserving vision in the face of ocular diseases. These applications leverage computer programs to perform tasks while emulating human cognitive processes, frequently employing machine learning techniques within the realm of ophthalmology. The integration of digital methods such as fundus photography, and optical coherence tomography has further fueled the potential of artificial intelligence in ophthalmology. Conditions affecting vision, including, age-related macular degeneration, diabetic retinopathy, glaucoma, and cataracts, have been targeted by artificial intelligence interventions. This paper focuses on how early detection of ophthalmic diseases using artificial intelligence.

Sr.No.	Paper ID	Title
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171	214	Shikha Malik, Ruchi Chauhan, Dhanashree Pannase, Prajakta Pawar <i>Advances in Skin Cancer Detection and Classification: An Overview</i>
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Abstract — This survey explores recent breakthroughs in skin cancer detection and classification methodologies, showcasing diverse approaches for early diagnosis. Various studies leverage advanced technologies, such as Global-Part Convolutional Neural Networks (GP-CNNs) and ensemble learning strategies, achieving state-of-the-art performance without external data. Additionally, research introduces an optimized Convolutional Neural Network (CNN) model, enhanced through a genetic algorithm for hyperparameter tuning, excelling in skin lesion classification across multiple evaluation metrics. The use of machine learning (ML) and deep learning (DL) techniques, coupled with the employment of k-nearest neighbor (KNN) and AlexNet with Grey Wolf Optimizer, further exemplifies remarkable accuracy exceeding 99%. These innovations hold promise for effective and efficient clinical tools, emphasizing the ongoing progress in automated skin cancer diagnosis.

Sr.No.	Paper ID	Title
172	215	Dhruv Bhatada, Dhruv Jhanwar, Harsh Pathare, Nimesh Gujari, Prof. Jignesh Patel <i>Semantic Hashing for Image Retrieval</i>

Abstract — In recent years, there has been a lot more tagging of images on big websites. This has led to a focus on finding images quickly in large databases. Currently, researchers are mostly working on making short codes that represent similar images, but they haven't looked much into how images look similar visually. This new idea suggests a way to make these short codes that keep both the meaning and how images look similar. It uses similarities in how text and images are structured to make these short codes. It also uses a rule called the "maximum entropy principle" to make the codes short and a rule called the "function decay principle" to get rid of unimportant visual details. Tests on a popular image collection show that this method can help find images better.

Sr.No.	Paper ID	Title
173	217	Ziyad Nomani, Sharvin Kamble, Vijay Parab, Durgesh Jagtap, Prof. Garima Gurjar <i>Object Sorting with Robotic Arm Using Image Processing</i>

Abstract — The Internet of Things facilitates integration of massive group of devices into networks to provide data for an ever-growing number of applications. The current and future IoT applications holds promise to improve the convenience and comfort for the user but are prone to various types of security threats. Therefore, it becomes crucial to address these security challenges. In this paper, we discuss major security threats that exist at IoT layers and review Machine Learning based IoT security systems with a focus on Supervised Learning.

Sr.No.	Paper ID	Title
174	218	MS. DHANASHREE INGAWALE, MS. MRUDULA MESTRY, MS. BHAGYASHREE DETHE, MS. DISHA KSHATRIYA, Prof. Kshpira

		Pandey <i>HYBRID SOLAR WIND ENERGY GENERATION SYSTEM</i>
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Abstract — The Hybrid energy having a two or more energy sources like wind energy or solar energy. Among various renewable energy sources, solar heater and wind turbines (WT) have gained special appeal due to their abundant local availability in nature, technological improvement, and economic benefits. By hybrid merging the two distributed energy sources, mutual interruptions because of their unfavorable traits, enhancing system dependability. This project's main objective is to minimize pollution while producing electrical energy utilizing clean, renewable energy sources.

Sr.No.	Paper ID	Title
175	219	Smit Sawant, Pratiksha Shetty, Faisal Sheikh, Abhishek Singh, Prof Ulhaskumar Ghokale <i>Crowdfunding using Blockchain</i>

Abstract—The world has been experiencing several crises recently, particularly on the social front. Hence, there has been an adoption of novel technologies to offer a wide range of solutions incorporating crowdfunding platforms with focus on social initiatives. These platforms have garnered notable attention from investors and donors, especially those leveraging blockchain technology for its reliability. Despite the growing interest, there remains a gap in fully harnessing the benefits of blockchain technology in social crowdfunding platforms. This paper introduces blockchain technology in a reward-based, socially oriented crowdfunding platform, aiming to establish a transparent, secure, auditable and efficient system. BELONG, as the pioneering platform, integrates crowdfunding, donations, and charitable investments, with Non-Fungible Tokens (NFTs) on the blockchain. The objective is to establish secure investment channels, addressing the limited exploration of integrating NFTs into humanitarian, charitable, or social endeavors. The platform relies on two funding strategies, both anchored in the NFT concept. This study seeks to engage various societal stakeholders interested in this domain, tailoring each strategy to specific categories such as donors, investors, and individuals, thereby ensuring funding opportunities for everyone. A dedicated prototype, using Ethereum and Nextjs, is implemented to demonstrate the platform's feasibility.

Sr.No.	Paper ID	Title
176	220	PARTH KACHA, ADITYA LONDHE, SAKSHI MANE, SHREYASH PATE, PROF.PRAJAKTA BOROLE <i>PLC Precision: Factory Acceptance Assessment</i>

Abstract — PLC Panel (Programmable Logic Controller Panel): Programmable Logic Controllers (PLCs) are compact industrial computing systems featuring modular components, specifically designed for automating customized control processes. These devices find extensive use in factories and industrial plants, where they efficiently manage and regulate various equipment such as motors, pumps, lights, fans, and circuit breakers. An integrated PLC Panel serves as a comprehensive solution, capable of monitoring diverse processes and

delivering data in a flexible manner. The insights derived from our recent factory visit and Factory Acceptance Test (FAT) procedure are invaluable not only for the success of our ongoing project but also for deepening our comprehension of industrial automation, quality control, and regulatory compliance within the realm of PLC panel manufacturing.

Sr.No.	Paper ID	Title
177	221	Nileema Pathak, Purushottam Patil <i>Streaming IOT data with MQTT and Apache Kafka</i>

Abstract— New generation applications of IOT range from healthcare, architecture, smart cities, home and industry automation etc. These applications demand flawless methods to collect data from power and size constrained devices and also seamless methods for streaming this collected data for processing. Modern technology supports these applications using various cutting edge technologies. MQTT protocol and Kafka streaming are two such technologies that compliment each other and provide efficient results. This paper discusses the possibilities of increasing efficiency of MQTT with the Kafka framework to analyze the data.

Sr.No.	Paper ID	Title
178	222	Anuj Shinde, Prasad Prabhu, Manav Jethwa, Mohd. Hannan Shaikh, Prof. Prajakta Borole <i>Navigating Advancements: From Micro Drones with LIDAR to Robotic Innovations in the IoT Era</i>

Abstract — This study presents a compact micro drone with LIDAR-based proximity sensing to address challenges in the drone industry, such as high costs and limited obstacle-avoidance capabilities. The micro drone integrates an Arduino Pro Mini, F3 EVO controller, LIDAR module, buzzer, LED indicators, and drone motors, forming a cost-effective, adaptable, and noise-efficient platform. The LIDAR sensor, utilizing infrared technology, detects obstacles and provides real-time proximity alerts through LED indicators and a buzzer for swift collision avoidance. The lightweight design enables takeoff from unconventional locations, catering to indoor operations, wildlife protection, and recreational use. Despite benefits, limitations include limited battery life, operating range, and manual obstacle avoidance. This research sets the foundation for democratizing drone technology, offering insights for future developments in autonomy and operational capabilities.

Sr.No.	Paper ID	Title
179	224	Jyoti Mali, ANKIT DEOGHARKAR, Jyoti Gurav, Mahalaxmi Palinje <i>B92 Quantum Key Distribution protocol for secure communication</i>

Abstract — Key distribution enables two parties to generate and share a random secret key, crucial for encrypting and decrypting messages using symmetric cryptosystems. In contrast to traditional methods relying on the complexity of mathematical problems, Quantum Key Distribution (QKD) introduces quantum mechanical elements, providing a foundation for significantly secure communication. This paper outlines the practical application of the B92 Quantum Key Distribution protocol using Matlab to enhance communication security. Among

the various possibilities, any two non-orthogonal states of the B92 protocol can be selected to model optical and electrical components. The B92 quantum coding scheme resembles BB84, encoding classical bits in two non-orthogonal BB84 states. Distinguishing itself from BB84, the B92 protocol employs only two states – one from the rectilinear basis (typically the H-polarization state) and another from the diagonal basis (typically the +45° - polarization state). This modification simplifies the protocol, making it more efficient while maintaining a high level of security. By employing these non-orthogonal states, the B92 protocol enhances the resilience of quantum key distribution for secure communication.

Sr.No.	Paper ID	Title
180	225	Priyanka Malgaonkar, Avinash Khambayat, Rohit Nagargoje <i>Differential Transform Method for Two Dimensional Differential Equations</i>

Abstract — In this investigation, we undertake a comprehensive analysis of solutions for various systems of PDE through the application of the Differential Transformation Method. The outcomes obtained from the DTM are systematically compared with results derived from alternative numerical methods. The DTM proves to be a powerful tool, offering swift solutions to both ordinary and partial differential equations through uncomplicated computer commands and codes. The introductory chapter establishes a foundational understanding of the Differential Transformation Method, presenting its fundamental definition and key properties. Overall, this study contributes to the exploration of efficient numerical methodologies, emphasizing the accessibility and simplicity afforded by the DTM.

Sr.No.	Paper ID	Title
181	226	Viraj Khanvilkar, Priyanshi Kanojia, Viraj Mahale, Kaustubh Kabtiyal, Prof. Jignesh Patel <i>Deep Learning Prediction Model in Healthcare: A Comprehensive Review</i>

Abstract — This research delves into the technical intricacies of deep learning-based predictive models in healthcare analytics, emphasizing their pivotal role in diagnostic accuracy and prognostic precision. With a meticulous focus on ethical considerations, the study rigorously examines prominent models such as Artificial Neural Networks (ANNs), Generative Adversarial Networks (GANs), Stacked Autoencoder (SAE), Recurrent Neural Network (RNN), and Convolutional Neural Networks (CNNs). Applications in Translational Bioinformatics, Medical Imaging, and Medical Informatics underscore the profound impact of deep learning on disease prediction, biomarker discovery, and personalized medicine. This concise analysis provides nuanced insights into both technical advancements and ethical dimensions in healthcare analytics.

Sr.No.	Paper ID	Title
182	227	Shubham Dhumal, Kartik Vora, Aman Yadav, Aayush Salvi, Prof. Renuka Nagpure <i>ByteBot</i>

Abstract — ByteBot is an innovative AI platform that ventures beyond traditional machine learning tools to revolutionize the creative landscape. With the aim of democratizing the creative potential of artificial intelligence, ByteBot provides an intuitive and user-friendly interface, enabling individuals and teams, regardless of their technical expertise, to engage with AI. At its core, ByteBot offers the capability to train custom Convolutional Neural Network (CNN) models and fine-tune model hyperparameters, thus allowing for flexibility and customization in creative applications. The platform emphasizes the generation of unique artwork, music, and captivating stories, effectively pushing the boundaries of what AI can achieve in the realm of creativity. Collaboration between humans and AI is facilitated, inspiring a new era of artistic expression and innovation. While the system's success hinges on technical, economic, and legal feasibility, ByteBot aspires to bridge the accessibility gap in AI by providing a user-centric approach and ensuring reliability and scalability. It opens up exciting possibilities for the intersection of technology and creativity, inspiring individuals to explore new frontiers in the realm of AI-driven creative expression. ByteBot represents an ambitious leap forward in the harmonious coexistence of human imagination and artificial intelligence.

Sr.No.	Paper ID	Title
183	228	Anushka Pandhere, Sakshi Adhikari, Shweta Mehetre, Sarita Mukkani, Prof. Antata Pal <i>DUTY MONITOR “MONITORING SYSTEM USING NFC”</i>

Abstract — Duty Monitor is a project aiming to develop an NFC tracker framework to screen the area of representatives in the working environment. Every worker will be given a cell phone with an implanted NFC tag, and certain areas will be set apart with an NFC per user. This system will help organizations increase their working environment performance and allow administration to quickly locate staff when needed. The project includes designing, implementing, and deploying devices such as an NFC per user, NFC labels, GUI, and an information base.

Sr.No.	Paper ID	Title
184	229	Neha Yadav, Vikas Mishra, Deepak Maurya, Nileema Pathak <i>Handwritten Text Recognition Using Machine Learning</i>

Abstract — This paper introduces a novel approach for Handwritten Text Recognition (HTR) that leverages the strengths of both traditional and deep learning models. Our hybrid methodology combines advanced feature extraction techniques with state-of-the-art convolutional neural networks (CNNs) to achieve superior accuracy in recognizing handwritten text. Through comprehensive experiments on benchmark datasets, we demonstrate the efficacy of our approach, showcasing significant improvements in accuracy and robustness over existing methods. The proposed model holds promise for various applications, including document digitization, transcription services, and archival preservation. This concise yet impactful contribution advances the field of HTR, providing a practical solution for real-world handwritten text recognition challenges.

Sr.No.	Paper ID	Title
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185	230	Archana Ingle, Sayanna Mukharjee, Amit Vishwakarma, Jatin Tiwari <i>Time Series Modeling for the Development of a Systematic , Cost Effective , and ML-Supported Cargo Tracking System: Optimizing Supply Chain Efficiency</i>
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Abstract — This paper proposes a time series model using machine learning for cost-effective cargo tracking. It optimizes supply chains by identifying minimum-cost routes, facility assignments, and integrating demand forecasting. Leveraging time series analysis, the study predicts transportation costs and demand fluctuations. Machine learning enables real-time decision-making, adapting to changing conditions. Key components include algorithms for route optimization, facility assignment, and demand forecasting, aiming for reduced operational costs and a resilient supply chain. The research provides insights for businesses adopting a data-driven approach to logistics, emphasizing efficiency and sustainability.

Sr.No.	Paper ID	Title
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186	231	Shweta Sankhe <i>SIMPLIFIED QUANTUM SENSING: BASICS AND BEYOND</i>
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Abstract — Our ability to interact with and understand the world hinges on our capacity to measure and sense various physical phenomena. While classical sensors have served us well, they often encounter fundamental limitations in sensitivity and accuracy. This is where quantum sensing emerges, leveraging the power of quantum mechanics to transcend these limitations and unlock a new realm of possibilities. This paper delves into the captivating world of quantum sensing, exploring its core principles, diverse sensor types, and its transformative potential across various fields.

Sr.No.	Paper ID	Title
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187	232	Vijesh Pannalal Prajapati, Rahul Rammilan Varma, Shivam Dayashankar Yadav, Dr. Bhavin C. Shah <i>System for detecting Intruders using Regulated Surveillance Robots in Apartments</i>
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Abstract — In motion, the Surveillance Robot is capable of performing intelligent video surveillance at medium distance. The Proposed system is designed to constantly monitor the surroundings, allowing effective control of any size of service area. The Surveillance Robot is the most appropriate solution for guarding areas where many apartments, fences or obstacles which do not allow performing video surveillance from remote locations are present. Using several robots in one general area on the ground achieves the highest levels of efficiency. Smart surveillance by several robots allows for a variety of cruise routes to be used, making it difficult for an intruder to predict when the robots will appear.

Sr.No.	Paper ID	Title
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188	234	Vivek Jha,Aniket Jha,Sahil Kadam,Prathamesh Gaikwad,Pranoti Nage <i>Next Generation Real Estate</i>
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Abstract — The real estate sector must embrace disruptive technologies to transition from conventional practices to Smart Real Estate (SRE). This research critically assesses the integration of disruptive technologies, referred to as the Big9, within real estate, including drones, the Internet of Things(IoT), cloud computing, augmented reality (AR), virtual reality(VR), and others. The study delves into how these technologies can provide valuable information to consumers, preventing potential regrets. The dissemination of information through platforms like smartphones, websites, and social media is explored, emphasizing SRE's core components: sustainability, innovative technology, and user-centric approaches. Recognizing key stakeholders—consumers, agents and associations, government and regulatory authorities, and complementary industries—the study identifies their specific needs, ranging from property transactions to financial considerations. By linking the Big9 technologies to consumers' core needs, the research aims to provide a comprehensive understanding of the resources required for effective information dissemination among stakeholders. Notably, due to the limited availability of research publications on SRE technologies, the study supplements its findings with insights from online reports, marking a pioneering effort in exploring the technological landscape of the real estate industry.

Sr.No.	Paper ID	Title
189	235	Shubham Sathe, Saurav Shelke, Udit Yadav, Prof. Akshata Patil <i>Inclusive Video Chat Website for Persons with Disability</i>

Abstract — This project aims to develop an innovative and inclusive video chat conference website designed specifically to meet the diverse needs of individuals with disabilities. The primary objective is to create a platform that fosters equal participation, communication, and collaboration for users of all abilities. The application will incorporate a range of features and functionalities to enhance accessibility and usability for individuals with various disabilities.

Sr.No.	Paper ID	Title
190	236	Ulhaskumar Gokhale, Charmi Chaniyara, Pranoti Nage, Jyoti Dange <i>Understanding the Foundations and Implications of Explainable Artificial Intelligence</i>

Abstract — Explainable Artificial Intelligence (XAI) is gaining increasing attention as machine learning models become more complex and pervasive in various domains. This research paper aims to provide an in-depth exploration of the concept of Explainable AI, its significance, and the various approaches employed to achieve transparency and interpretability in machine learning models. The paper also delves into the challenges associated with XAI and its potential impact on diverse applications. Through a comprehensive review of existing literature and case studies, this paper aims to contribute to a better understanding of XAI and its role in shaping the future of artificial intelligence systems.

Sr.No.	Paper ID	Title
191	237	Priyanka Tripathi, Dr. Jagadish B. Helonde <i>Review on the Integration of Electric Vehicles and Renewable Energy in Power System</i>

Abstract — The increasing number of electric vehicles, or EVs, is a big step in the direction of ecologically friendly and sustainable transportation options. The administration and regulation of power systems is made more difficult by the increased use of EVs. The key to overcoming these obstacles appears to be integrating Renewable Energy Sources (RESs) into the network architecture. The integration of EVs and RESs into power grids is thoroughly reviewed in this research. According to a bibliographic analysis, IEEE Access is the journal that has the biggest influence in this area. In order to improve the classification of literature, the paper offers an analytical synopsis of each contribution. The literature is further divided into two categories: heuristic and mathematical algorithms. Two popular formulations of these algorithms are particle swarm optimisation and mixed integer linear programming. Interestingly, the most popular platform is MATLAB/Simulink, and the main optimisation tool is CPLEX.

Sr.No.	Paper ID	Title
192	238	Arya Jadhav, Aaryaman Kshetriya, Dhanashri Bhandari, Kousik Ghosh, Mahalaxmi Palinje <i>Samva दत्तः: A rocker bogie suspension for bridging communication gaps</i>

Abstract — Traditional rovers face challenges on rough terrain, frequently on the verge of tipping over. Moreover, hazardous zones and remote, inaccessible regions present hindrance to reliable data transmission, necessitating improved communication solutions. To overcome these limitations, this paper proposes the development of a highly stable rocker bogie suspension system that maintains contact with the ground on various terrain surfaces. To address the identified challenge, an advanced IoT based monitoring system that incorporates a range of sensors and wireless communication technology for effective data collection, analysis, and transmission is proposed. This system incorporates varied sensors and wireless communication technology to facilitate effective data collection, analysis and transmission, ensuring uninterrupted operation. The system is designed to be highly resilient and adaptable, with the integration of a camera for real-time video footage transmission and a GPS module that sends notifications via SIM800L GPRS in case of rover displacement. This proposed model will be a bluetooth-based rocker bogie suspension or a communicator serving as a bridge between remote, inaccessible regions with limited communication infrastructure and the user controlling the rover via a user-friendly interface.

Sr.No.	Paper ID	Title
193	239	Manthan Amolchandra Raut, Yogita Mahesh Madhav, Pratik Sahebrao Nipane, Akshat Kirti Kaklotar, Dr. Bhavin C. Shah <i>Economical home automation system using mesh networking through ESPNOW protocol</i>

Abstract — The rapid development of Internet of Things (IoT) technology has ushered in a new era of smart homes with promises of greater efficiency, convenience, and security. This study explores a new method of home automation using the ESP-NOW protocol, a low-power, high-throughput communication protocol developed by Espressif Systems for their ESP32 microcontrollers. Using a network of ESP32 devices strategically placed around a home, our recommended home automation system enables real-time environmental monitoring and

control over numerous appliances. These devices establish an effective and decentralized wireless mesh network by leveraging the ESP-NOW protocol for smooth communication. The proposed paper addresses the growing demand for trustworthy and affordably priced home automation system.

Sr.No.	Paper ID	Title
194	240	Hemangini Vinayak Kundaram, Mansi Vishwanath Bole, Vedant Rajendra Churi, Sneha Vilas Jadhav, Dr.Bhavin C. Shah <i>Intelligent EV Charging Management System</i>

Abstract — Many countries have started working to create ecologically friendly energy that doesn't require burning because of the depletion of fossil fuels and the severe environmental problems they cause. The move to electric vehicles is one global strategy for decarbonising the transportation industry. India is one of the countries endorsing the programme, which aims to achieve at least 30% electric vehicle sales by 2030. Managing these private stations and making them user-friendly and easy to use will also be important as the number of EV vehicles and their need for private stations rises since the charging of automobiles is the biggest concern associated with EVs that people have.

Sr.No.	Paper ID	Title
195	241	Prof. Archana Ingle , Manali Kadam Sourav Samanta , Ashish Thakur <i>Enforce360: YOLOv8 and Tesseract-OCR for Comprehensive Helmet Rule Adherence</i>

Abstract — In this project, we aim to develop a real-time system employing advanced machine learning algorithms to address critical issues related to road safety, specifically targeting the detection of helmet violations among motor vehicle riders. Concurrently, the system will extract crucial license plate information, utilizing computer vision and object detection models facilitated by machine learning. The primary objective is to foster road safety adherence while establishing an efficient framework for streamlined data collection in the real-time of traffic monitoring and law enforcement. The proposed system integrates cutting-edge techniques, including Optical Character Recognition (OCR), to accurately extract alphanumeric characters from license plates, enabling further in-depth analysis. The project's significance is underscored by its potential to make substantial contributions to road safety enforcement, promoting law compliance through automated data collection processes. By precisely identifying instances of helmet violations, the system becomes a valuable tool for law enforcement agencies in their efforts to monitor and address traffic violations effectively. Additionally, the real-time extraction of license plate data opens up a myriad of applications, ranging from seamless integration with toll collection systems to efficient parking management solutions.

Sr.No.	Paper ID	Title
196	242	Mahalaxmi Palinje , Jyoti Gurav , Ankit Deogharkar , Jyoti Mali <i>Comparative Evaluation of IDS using Machine Learning</i>

Abstract — Intrusion Detection System (IDS) are essential security measures that protect

computer networks from unauthorized access and potential threats. Traditional IDS rely on signature- based detection methods, which may not be effective against newly emerging threats. In contrast, Machine Learning (ML)-based IDS can adapt and learn from the changing network environment and detect new and unknown threats. This paper presents a performance evaluation of Intrusion Detection Systems that utilize Machine Learning Techniques The performance evaluation of IDS using ML is carried out on several metrics, including detection accuracy, false positives, and false negatives. The evaluation also includes a comparison of the different ML algorithms used for IDS. The results of the evaluation show that ML-based IDS outperforms traditional signature-based IDS and that certain ML algorithms are more effective than others in detecting network attacks. The paper concludes by discussing the future research directions in IDS using ML.

Sr.No.	Paper ID	Title
197	245	Prof. Bhavna Arora, Prof. Pranali Bhusare, Prof. Shweta Sharma, Prof.Charmi Chaniyara <i>DeepPDF: A Deep Learning Approach for PDF Analysis</i>

Abstract — Scientific publications encompass valuable information crucial not only for researchers but also for their respective institutions and managers. The vast volume of this information necessitates automation for efficient collection and extraction. However, the historical orientation of publications towards print, coupled with the prevalent use of digital formats such as PDF, presents significant challenges for effective information extraction. Conventional tools often rely on converting PDFs into plain text to facilitate machine processing. Although several tools can remove content with reasonable accuracy, the accurate labelling and reconstruction of this data into a machine-readable format pose substantial challenges. This study explores the possibility of considering PDF documents as images, suggesting the application of deep learning and image analysis for this particular task could yield more accurate tools for extracting information compared to existing methods.

Sr.No.	Paper ID	Title
198	246	Dr. Suvarna Pansambal, Dr. Swati Deshmukh <i>Comprehensive Survey of Visibility Prediction system</i>

Abstract — Human perception of the environment depends on atmospheric visibility, which is influenced by factors such as climate, contaminated species, and air quality. It has an impact on life quality, traffic safety, and human health. Via numerical indices, digital image processing techniques offer visibility data. Although predicting visibility is crucial for life and production, there are more intricate aspects that influence meteorological visibility. Like weather prediction, current methods are based on numerical prediction. This research presents a comprehensive study of various prediction techniques.

Sr.No.	Paper ID	Title
199	247	Mannan Kochar, Shubham Jha, Rahul Jethva, Daksh Kamble, Prof. Bhagyashree Gaikwad

		<i>RECENT TECHNOLOGIES FOR PLASTIC WASTE TREATMENT</i>
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Abstract — Plastic disposal has always been a global challenge. Efficient recycling and proper waste management of plastics is essential for resource conservation and energy generation which will help solve various global issues. This review describes the detrimental effects of the generation of increasing plastic waste, and a few solutions to salvage the waste plastic. This review highlights about extraction of green hydrogen as a co-product. Over the years, hydrogen has been industrially made along with waste byproducts, like coke deposition. Pyrolysis done at very high temperatures results in pollution and is expensive to maintain. However recent new technologies have emerged suggesting alterations in the traditional Pyrolysis method, which generates much cleaner hydrogen. There are other potential areas where plastic can be recycled as fillers to save resources and increase the durability of the product. Several other methods are under development to extract valuable and useful chemicals from the polymers. Overall, there are several challenges to this date that are faced in this field, preventing the rapid growth of this sector.

Sr.No.	Paper ID	Title
200	248	Shaily Goyal, Ashwini Gaikwad, Anuja Hodage <i>WordNet mapping of terms from Twitter</i>

Abstract — The analysis of data from social media platforms, such as Twitter, can play a significant role in our analysis in the age of digital communication, as individuals use these platforms for quick and frequent communications. The goal of this project is to map the tweets that are retrieved from Twitter and used in regular conversations to the WordNet, extracting phrases or acronyms that are not included in the WordNet. WordNet is an online lexical database that users may access through a web browser. It organizes English words into synsets, or sets of synonyms, gives brief definitions and use examples, and keeps track of several relationships between the members of these synsets. The project's goal is to give beginners access to a dictionary of meanings for commonly used Internet specific words.

Sr.No.	Paper ID	Title
201	250	Siddhesh Pattipaka, Prajwal Mundhe, Niraj Joshi, Naresh Choudhary and Prof. Pragya Jain <i>Automatic Power Factor Controller (APFC)</i>

Abstract — In the ever-changing and boundless world of today, where businesses are expanding quickly, technology and control are essential. For optimal output and efficiency, our equipment and machines require superior controlling, powering, and protection in addition to advanced technology. We are paying particular attention to the powering aspect of this project. What is required for machines and equipment to be controlled? "APFC Panel" is the response. What is that now? Basically, it's a cabinet with electrical components inside that regulate different machines, motors, etc. These days, control panels are utilized in practically all industrial and commercial applications. They also provide safety for our machinery and equipment.

Sr.No.	Paper	Title
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	ID	
202	251	Gauri Vaidya, Sowmya Kini Prabhu <i>A Study of IoT with Blockchain Technology</i>
<p>Abstract — The intersection of blockchain technology and the Internet of Things (IoT) to provide a comprehensive understanding of current research trends, challenges, and potential applications. Through a rigorous analysis of scholarly articles, conference papers, and white papers, this review synthesizes existing knowledge to identify key themes, technological advancements, and future directions in the integration of blockchain with IoT ecosystems. The review highlights the potential benefits of combining blockchain and IoT, such as enhanced security, data integrity, decentralization, and automation, while also addressing critical issues including scalability, interoperability, privacy, and regulatory challenges. By systematically analyzing the existing literature, this review aims to provide valuable insights for researchers, practitioners, and policymakers seeking to leverage blockchain technology to optimize IoT deployments and unlock new opportunities across various domains.</p>		
Sr.No.	Paper ID	Title
203	252	Avinash Khambayat, P.M. Jagtap <i>Integral Transforms and its Application</i>
<p>Abstract — The computation of integral equations is required in many areas of mathematics, including calculus and pure analysis. In many branches of mathematics and mechanical science, it is one of the most important areas of analysis and application in engineering. Fredholm integral equation, Volteral integral equation and Laplace transform and their applications will be discuss in this paper.</p>		
Sr.No.	Paper ID	Title
204	254	Prof.Vasundhra Gupta, Dr. Niranjana Samudre, Prof.Aman Sharma <i>Securing the Sustainable Energy with AI -An overview</i>
<p>Abstract — In recent years, India has faced numerous challenges in its power sector, including issues with distribution, transmission, and generation. The country's current electrical infrastructure requires significant improvements to meet the growing demand for electricity. Fortunately, artificial intelligence (AI) has emerged as a promising solution to address these flaws and enhance power sector efficiency. AI, a branch of computer science, involves the development of intelligent machines that can perform tasks without human intervention. By analysing large sets of data and making informed decisions, AI systems have the potential to transform the power sector in India. Currently, India's power distribution system is plagued with issues such as high transmission losses, power theft, and billing inaccuracies. These problems result in significant revenue losses for power companies and unreliable electricity supply for consumers. However, by integrating AI into the distribution network, these issues can be mitigated. In this paper we will discuss the concepts of artificial intelligence, the overview of current power system of India, the role of artificial intelligence in eradicating the current flaws in the system and also in getting the power sector infrastructure future ready.</p>		

Sr.No.	Paper ID	Title
205	255	Prof. Shweta Sharma, Prof. Bhavna Arora, Prof Pranali Bhusare, Prof Charmi Chaniyara <i>Analyzing Video Game Pricing and Recommendation Algorithms on PlaySense</i>

Abstract — Video games are widely embraced as a form of entertainment, offering diverse genres and modes to suit various preferences. Beyond mere amusement, they offer cognitive benefits, foster creativity, and alleviate stress. Additionally, certain games facilitate global social connections among players. Despite their manifold advantages, selecting the right game amidst the plethora of options can be daunting. To address this challenge, we propose a website designed to provide tailored recommendations based on user input. This website, constructed using Streamlit, leverages a content-based recommender system driven by cosine similarity, a metric measuring the resemblance between two items. Drawing from a dataset encompassing over 5,000 games from platforms like Steam, epic-games, and PlayStation, we extract features such as genres, themes, keywords, developers, publishers, and platforms. By calculating the cosine similarity between each game pair, we rank the recommendations according to their relevance to the user input. Users simply input a game they enjoy, and the website generates a list of similar games along with pertinent information and links to purchase from various storefronts.

Sr.No.	Paper ID	Title
206	256	Suchetadevi Gaikwad, Dhanashree Bhanushali, Rahul Sarvaiya, Ashwini Kachare <i>Helmet Detection and Face Identification on Construction Site using CNN</i>

Abstract — In developing country like India the construction industry is one of the largest sectors of employment in India, it is also the second most hazardous. Construction sites can be hazardous environments where workers are constantly exposed to various dangers, including head injuries from falling debris, moving equipment, or other types of accidents. However, despite the importance of wearing helmets, it is not uncommon for workers to forget to put them on or take them off at inappropriate times. This is where helmet detection technology comes in. By using computer vision and machine learning algorithms, it is now possible to detect whether workers are wearing helmets in real-time and alert them if they are not. Our application will help to detect whether the worker is wearing the helmet or not. This will reduce the chances of injuries on construction sites. Also, the application can mark attendance of worker by face detection to reduce manual effort of marking it.

Sr.No.	Paper ID	Title
207	257	Prof. Jignesh Patel, Prof. Mahendra Patil, Viraj Khanvilkar, Manan Mistry <i>Advanced Deep Learning for Network Intrusion Detection Systems</i>

Abstract — This research underscores a technical synergy in advancing Network Intrusion Detection Systems (NIDS) through cutting-edge deep learning techniques. Integration of

CNNs, RNNs, attention mechanisms, and autoencoders is explored for effective anomaly detection, with emphasis on LSTM networks and attention mechanisms for real-time adaptability. Transfer learning with pre-trained models expedites training and enhances generalization across diverse network environments. Specific technologies within the framework, such as LSTM, Autoencoders, RNNs, and Big Data integration (Apache Kafka and Apache Flink), contribute to real-time processing, advanced data analysis, and model training. The system architecture and intrusion detection module exemplify a sophisticated and resilient NIDS design, showcasing a strategic evolution beyond traditional methods.

Sr.No.	Paper ID	Title
208	260	Niranjan Samudre, Nilesh Shimpi, Vasundhra Gupta <i>Comparative Analysis of Emotion Recognition Methods: A Evaluation Measure-based Approach</i>

Abstract — Emotion recognition has gained significant attention in recent years due to its applications in human-computer interaction, affective computing, and mental health assessment. Various methods and algorithms have been proposed to recognize human emotions from different modalities such as facial expressions, speech, and physiological signals. However, comparing these methods is challenging due to the lack of standardized evaluation measures and benchmarks. This paper presents a comprehensive comparative analysis of emotion recognition methods based on evaluation measures. We apply the evaluation measures like accuracy, sensitivity, and specificity to assess the performance of different emotion recognition methods across different modalities and datasets. Our analysis provides insights into the strengths and limitations of each method. Overall, this comparative analysis serves as a valuable resource for researchers and practitioners in the field of emotion recognition, aiding in the selection and optimization of suitable methods for specific applications.

Sr.No.	Paper ID	Title
209	261	Prof Pranali Bhusare, Prof. Shweta Sharma, Prof. Bhavna Arora, Dhruv Arora, Parnshree Gautam <i>GOSOLO-A FREELANCER PORTAL</i>

Abstract — Amid the pandemic, numerous individuals found themselves without employment opportunities, while many remained idle at home. To address this issue, we introduced the GoSolo Freelancer & Portal, tailored specifically for independent contractors. Unlike traditional employment, freelancers operate on a project basis, offering the flexibility to work part-time yet earn a full-time income based on their skills. Upon registration, users can select their role as either a Freelancer or a Service Provider. Our platform incorporates a blogging feature, enabling users, including service providers and students, to contribute articles on various aspects of freelancing. One of the primary benefits of freelancing is the autonomy it affords individuals over their workload, client selection, and income. Freelancers are essentially self-employed, granting them the freedom to choose their projects and duration of engagement. This level of control surpasses that of conventional employment, offering unparalleled freedom and flexibility in terms of work type, hours, location, and workload.

Sr.No.	Paper ID	Title
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210	262	Aiyeaan Shaikh, Omkar Nikam, Ayaan Memon, Nikhil Gajakosh, Prof. Parnoti Nage <i>Audio Based Bird Breed Detection</i>
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Abstract — Recognition and identification of bird species through acoustic signals has received significant attention due to its potential applications in wildlife monitoring, ecological research, and conservation efforts. This paper presents a new approach to automatically detect and classify bird breeds based on their vocalizations alone. The proposed method uses advanced signal processing techniques, machine learning algorithms, and deep learning architectures to extract distinguishing features from audio recordings and classify them into specific bird breeds. Initially, audio signals are pre-processed to remove noise and improve the relevant features. Spectrogram are calculated to represent the frequency content of the signals over time and provide valuable insight into the unique vocalization characteristics of each bird breed. Feature extraction techniques are used to capture the distinctive call attributes of different bird breeds.

Sr.No.	Paper ID	Title
211	263	Siddhesh Jaywant Haryan, Abhiyash Suresh Bait, Aniruddha Abhimanyu Dabade, Sunit Sunil Chavhan, Antara Pal <i>WELLNESS SMART : A Review of Android Applications for Personal Healthcare Services and Well-Being</i>

Abstract — The proliferation of smartphones and the quick development of digital technology have opened up new avenues for creative wellness and healthcare solutions. In response to the increasing demand for accessible and comprehensive health management tools, we present an abstract for a Wellness App designed to promote holistic well-being. Our Wellness Smart App seeks to bridge the gap between healthcare providers, patients, and individuals seeking to lead healthier lives. The app aims to offer a seamless and user-friendly interface that accommodates diverse user profiles, including patients, healthcare professionals, caregivers, and health conscious individuals. Through this platform, users can access a wide range of features and functionalities.

Sr.No.	Paper ID	Title
212	264	Prof. Jaya Nag Mathur <i>Predicting Bitcoin Prices Using High-Performance Machine Learning Models</i>

Abstract — This paper explores the application of high-performance machine learning models for predicting Bitcoin prices in short and medium terms. Bitcoin, a decentralized cryptocurrency, operates on peer-to-peer technology without central authority or banking institutions. The open-source nature of Bitcoin allows anyone to participate in its network. However, the significant issue of price volatility necessitates the study of underlying price models. This research extends beyond previous works by employing machine learning-based classification and regression models to forecast Bitcoin prices for various time intervals, ranging from end-of-day to ninety days. The developed model demonstrates superior performance compared to existing models, achieving an accuracy of 65% and an error percentage of 1.44% for next-day forecasts, and 62% to 64% accuracy with 2.88% to 4.10%

error for seventh to ninetieth day forecasts.

Sr.No.	Paper ID	Title
213	266	Deepali Maste, Dr Leena Ragma <i>Role Based Access Control in Healthcare : Review</i>

Abstract — RBAC (Role-Based Access Control) is a crucial security model utilized in healthcare settings to regulate access to sensitive patient data based on the roles of users, such as physicians, patients, or applications. This approach ensures that access is granted only to authorized individuals or systems according to their designated roles. Protecting sensitive patient data from unauthorized access is paramount to prevent privacy breaches and medical identity theft. RBAC facilitates access control by granting permissions based on the roles of clients, making it particularly suitable for scenarios where access needs are determined primarily by role rather than specific attributes. In the context of healthcare systems, RBAC helps enforce strict access controls, ensuring that only authorized users with appropriate roles can access sensitive data. The SMART on FHIR framework complements RBAC by defining the functionality requested by client applications through scopes, which are declared by the Authorization Server. These scopes typically encompass three levels: patient, user, and system, delineating the extent of access and functionality granted to client applications within the healthcare ecosystem. This integration enhances security and control over data access, contributing to the overall protection of sensitive healthcare information. With the understanding of simplicity of RBAC and its limitations, various approaches proposed in combination with RBAC to overcome limitations like flexibility, privacy, and trust mechanism. The issue arises when the actual roles and access requirements in practice deviate from those specified in policy documents, even in subtle ways. Additionally, roles that were initially created as temporary solutions tend to persist over time. Comparative analysis is performed to understand RBAC in conjunction with other approaches.

Sr.No.	Paper ID	Title
214	267	Anuja Gaikwad, Shaily Goyal <i>HD-CNN: Early-stage Alzheimer Detection system using Hybrid Deep Convolutional Neural Network</i>

Abstract — According to recent predictions, Alzheimer disease (AD), which is presently the sixth greatest cause of impermanence in the USA, may come in third place among all causes of death for seniors, just after cancer and heart disease. It is obvious that it is crucial to identify this illness early and stop it from spreading. Numerous medical tests are necessary for the diagnosis of Alzheimer disease (AD), which generates enormous amounts of multivariate heterogeneous data. The varied nature of medical testing makes it difficult and taxing to manually compare, evaluate, and analyze this data. In this research we proposed an early-stage detection AD using hybrid deep learning algorithms. The various feature extraction and selection methods are used for extraction of potential features. The RESNET-101 and VGGNET are the deep learning frameworks that we use for classification. The YOLOv8 is used for data preprocessing as well as object detection. The RESNET-101 obtains higher 99.35% accuracy with 100 epoch size and 15 hidden layers which is higher than all experiments. In comparative analysis our model evaluation has done with VGGNET and ShallowNet, As a

result our system outperforms higher result than both.

Sr.No.	Paper ID	Title
215	269	Riya Nandeshwar, Pranav Nikam, Sania Patel, Krushna Teli, Prof. Akshata Patil <i>PhishGuard: Your Online Safety Shield</i>

Abstract — Phishing Scam is the problems faced worldwide which leads to loss in billions of dollars each year. The phishing websites are almost an exact replica of the reputed company's website which fools the user into giving away their sensitive information such as their bank account credentials. To prevent the phishing attack various solutions are introduced. Albeit, using only one method is not an accurate solution to the phishing problem. Data mining technique can be regarded as an effective measure for the prevention of phishing scams. In this paper, an AI based real-time phishing website detection chrome extension is proposed. We made use of various data mining techniques to determine the veracity of the website and to classify them as a safe or a phishing website. We used different machine learning classifiers to achieve a phishing website detection with high accuracy and precision. We have evaluated the accuracy and precision of different classifiers and have performed a comparison of the same. After evaluation, the results show that Random Forest has performed better than any other classifiers in terms of accuracy and precision. The resulting accuracy and precision of Random Forest are 97.48% and 0.99 respectively. Random forest has a fast runtime and has proved to provide with fast and accurate results.

Sr.No.	Paper ID	Title
216	270	Sakshi Pandey <i>A STUDY OF NUMERICAL LINEAR ALGEBRA IN DATA MINING</i>

Abstract — In contemporary society, substantial volumes of data reside within databases, aiming to glean valuable insights. Frequently, during data collection, the specific information that will be needed is uncertain. Consequently, databases are often not explicitly intended for extracting particular details; instead, they tend to be largely unstructured. Data mining is the term used to describe the science of obtaining valuable information from enormous amounts of data.

Sr.No.	Paper ID	Title
217	271	Ashwini Ashok Gaikwad <i>Chatbot with Attention Mechanism</i>

Abstract — Voice and chatbots are the new norm for human machine interaction. The time when individuals relied solely on keyboards to perform tasks is long gone. Artificial intelligence and machine learning technologies are being improved or modified in part by the new ways that people are interacting with machines. The goal of this project was to use artificial intelligence techniques, such as natural language understanding, to create a chatbot that would help students apply online and get into a certain college or university. enabling people to communicate with

the chatbot through natural language input and to train it with the right techniques so that it is prepared to respond. The finest feature is that a person or student can communicate with the chatbot for leisure. Users will be able to assist and steer users toward obtaining admission. Natural language processing methods, machine learning algorithms, and artificial intelligence are being used in numerous research projects to create conversational or dialogue agents. Handwritten rules have been the basis for chatbot architecture construction approaches in the past. In 2015, new techniques such as end-to-end trainable neural networks were released, coinciding with the rise of deep learning. More precisely, conversational modeling is dominated by the recurrent encoder-decoder model. This design works exceptionally well in the neural machine translation area, from whence it was adopted. Many of the chatbots that are available now were created with rule-based, retrieval-based, or basic machine learning algorithms, all of which produce subpar outcomes. Here, we employ an encoder-decoder that uses LSTM (Long-Short-Term-Memory) cells in conjunction with a recurrent neural network.

Sr.No.	Paper ID	Title
218	272	Chaitanya Kolte, Priyanka Sulakhe <i>The Use of Total Quality Management to Increase Organizational Effectiveness</i>

Abstract — This paper aims to examine the essential Components of total quality management (TQM), representing a cohesive initiative designed to enhance quality across all organizational levels. The historical progression of TQM unfolds in four stages: quality inspections, quality control, quality assurance, and ultimately, the establishment of the TQM procedural framework. The manifestation of quality in human actions is evident.

Sr.No.	Paper ID	Title
219	273	Neha Parulekar, Divya Acharya <i>Applications of Ring Theory: A Comprehensive Overview</i>

Abstract — This paper provides an in-depth exploration of the diverse applications of ring theory across various fields of mathematics and beyond. Starting from the foundational concepts of rings, the paper examines specific examples and case studies where ring theory plays a crucial role in solving theoretical and practical problems.

Sr.No.	Paper ID	Title
220	275	Divy Solanki, Suraj Prajapati, Jamil Shaikh, Manthan Nikam, Shweta Sharma <i>Streamlining 3D Printing: A Web-Based Approach for Enhanced User Experience and Quotation Generation</i>

Abstract — With the changing technologies and upcoming trends in the technical and industrial market the expectation of the world towards the interfaces that provide them with the access to various operations and services over the internet has changes magnificently. Implementing a capable system to withstand the user expectation is a challenging task, wherein, companies indulge themselves into recursive research for user experience enhancement and

improvisation of the product/service based on the feedback of the user base. This review has been constructed to get insightful information on how these different challenges are overcome and addressed within a company's ecosystem. A thorough research in improvements to user experience composes of various steps such as system understanding, market research, competitor research, user expectation and various official and unofficial surveys. The broad idea behind these research iterations is to improve an existing system or create a well-defined and globally accessible system. The market for 3D printing is highly competitive and thriving for sustainability. This review will indulge you in understanding the automation and delivery undergoing in the digitalized 3D printing systems.

Sr. No.	Paper ID	Title
221	276	Prof. M. S. Lohar, Priyanka Bhat, Anuja Kapse, Tejaswini Patil, Madhuri Katkar, Kavita Phadake <i>DEAF HELPER (SIGN LANGUAGE RECOGNITION)</i>

Abstract — In this world, authorities have not given people with hearing loss any serious consideration. As a result, these individuals become alienated from their social surroundings and confused while selecting educational media to engage with. With the use of sign language recognition technology, this project aims to make it easier for those who are deaf or hard of hearing to be recognized and understood through their communication. It includes a number of features, including forums, customer service, interactive videos, sign language translation, registration, information, history, events, donations, and shops.

Sr.No.	Paper ID	Title
222	278	Chaitrali Chandrashekar Parab, Drishti Kartik Malavade, Devashree Rajesh Karande, Viraj Khanvilkar, Prof. Jignesh Patel <i>Leveraging Artificial Intelligence for Educational Enhancement</i>

Abstract — This research explores how Artificial Intelligence (AI) can revolutionize education. By using advanced AI techniques like machine learning and natural language processing, we examine how it can improve teaching and administrative tasks. We focus on personalized learning, smarter testing methods, and automated administrative duties. We also look at AI tools like chatbots and learning analytics to boost student engagement and academic success. Through case studies, we show how AI is changing education for the better, making learning more accessible and effective for all.

Sr.No.	Paper ID	Title
223	279	Aman Joshi, Dishant Jani, Kamendra Singh Jhala, Sairaj More, Prof. Ashwini Gaikwad <i>GLOBAL GDP ANALYSIS</i>

Abstract — GDP is the monetary value of finished products and services generated inside a country's borders during a given time period. GDP is often used to assess a country's economic health and standard of living. GDP's standardized measurement across countries allows for accurate comparisons of productivity levels.