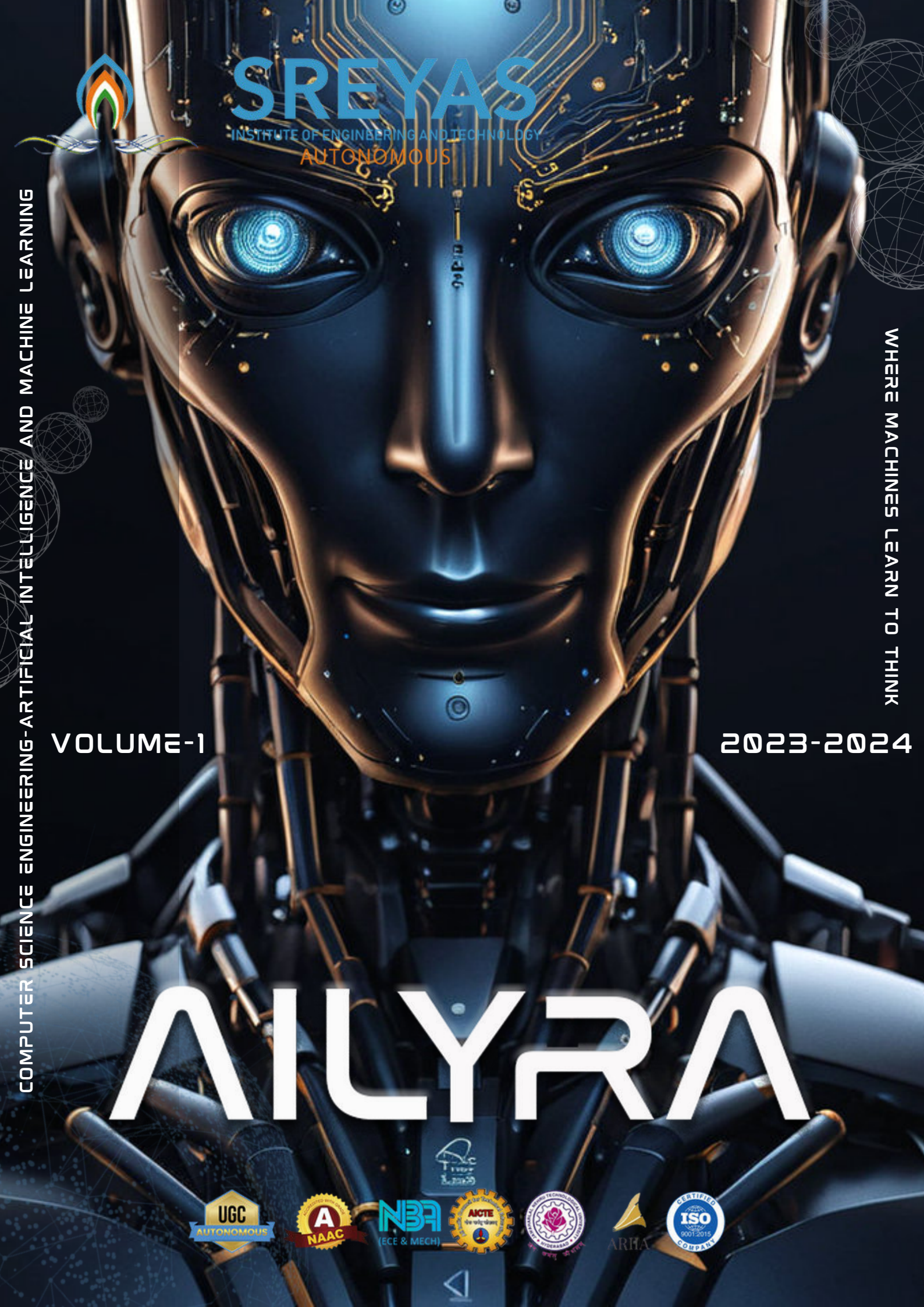
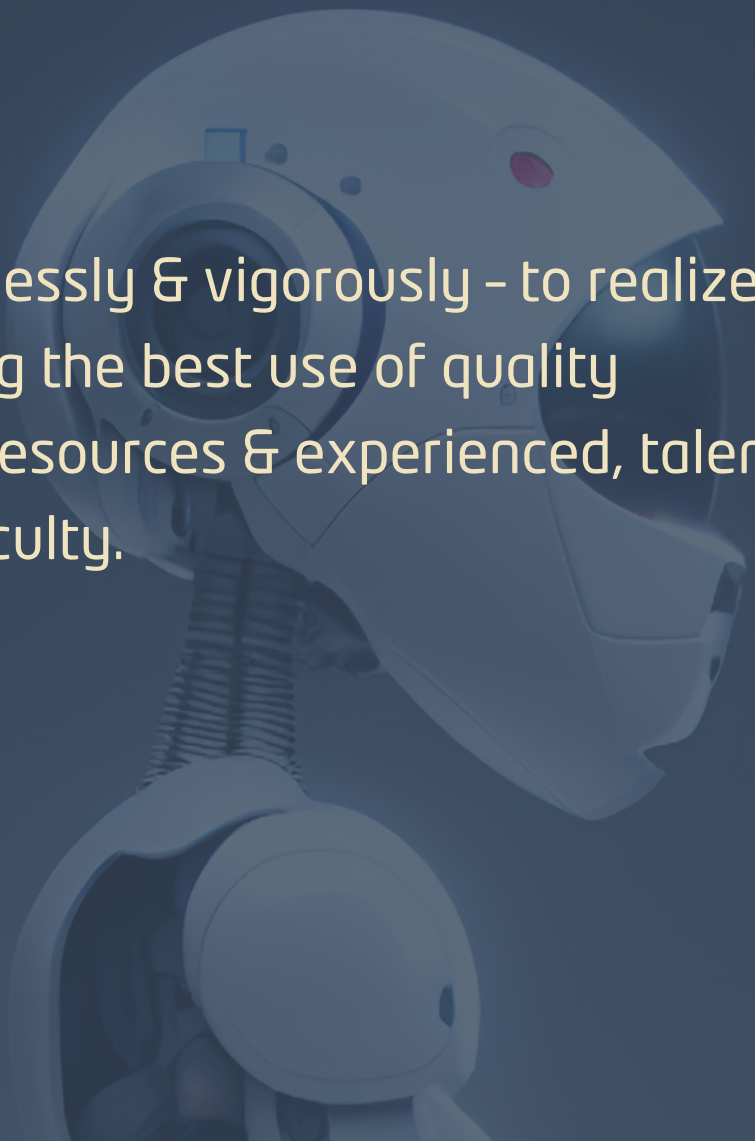

SREYAS
INSTITUTE OF ENGINEERING AND TECHNOLOGY
AUTONOMOUS
COMPUTER SCIENCE ENGINEERING-ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
WHERE MACHINES LEARN TO THINK
VOLUME-1
2023-2024
AILYRA
UGC AUTONOMOUS
NAAC
NBA (ECE & MECH)
AICTE
ISO 9001:2015

INSTITUTIONAL

VISION

Sreyas will be a global leader in imparting futuristic technical Education with human values. It fosters ethical, social & moral values through holistic learning to groom young minds into responsible and successful global citizens.



MISSION

To strive relentlessly & vigorously - to realize the vision by making the best use of quality infrastructure, resources & experienced, talented & committed faculty.

DEPARTMENTAL

VISION

To produce competent professionals in the field of AI&ML by imparting state-of-art technologies and inculcating strong ethical values.

MISSION

1. To impart technical education competency with high quality educational practices through qualified human resources and provisioning of good infrastructure
2. Accomplish process to enhance knowledge in the academic and foster research-oriented environment.
3. To encourage education-oriented learning and social
responsibility with professional ethics.

ADMINISTRATION

SRI ANANTULA VINAY KUMAR REDDY *CHAIRMAN*

Sri Anantula Vinay Kumar Reddy is the Chairman of Sreyas Institute of Engineering and Technology. He has a vision to make Sreyas a premier engineering institution and believes the college provides a great environment for students to learn and grow.

SRI HRIDAY REDDY *VICE-CHAIRMAN*

Mr. Hriday Reddy is the Vice Chairman of Sreyas Institute of Engineering and Technology. He says, "Education is about imparting knowledge and inspiring minds, nurturing potential, and shaping future leaders. Together, we build a legacy of excellence and innovation."

SRI CHINTALA RAVINDRANATH YADAV *SECRETARY*

Sri Chintala Ravindranath Yadav is the Secretary of the Sreyas Institute of Engineering and Technology. He promises students a nurturing environment for academic and personal excellence, preparing them for successful engineering careers through rigorous programs and industry connections.

SRI NIRVETLA SHARATH REDDY

Sri Nirvetla Sharath Reddy, Treasurer and CEO, emphasizes SREYAS's commitment to student success through top-notch education, innovative technology, and a vibrant campus life. With a focus on addressing students' needs and fostering practical skills, SREYAS prepares students to excel in a competitive world.

DR.K. SAGAR

Dr.K.Sagar, Principal, highlights Sreyas's eco-friendly campus and top-tier infrastructure, promoting academic and professional excellence. With 28 years of experience, Dr. Sagar has published over 50 papers and guided numerous projects, focusing on Soft Computing, Advanced Operating Systems, and Deep Learning.

INTRODUCTION FOR CSE (AIML) DEPARTMENT MAGAZINE

Welcome to the CSE (AIML) Department Magazine!

The world of technology is evolving at an unprecedented pace, and the Department of Computer Science and Engineering (Artificial Intelligence and Machine Learning) is at the forefront of this transformation. This magazine serves as a window into our vibrant department, showcasing our students' and faculty's achievements, creativity, and aspirations.

Why a Magazine?

A department magazine is a collection of articles and a platform that brings our community together, fosters innovation and inspires creativity. Here's why it matters:

- Showcase of Talent: It highlights the accomplishments of students and faculty, whether they are groundbreaking projects, research papers, or innovative solutions to real-world problems.
- Knowledge Sharing: By sharing insights on emerging trends in AIML, from deep learning to robotics, the magazine serves as a valuable resource for enthusiasts and experts alike.
- Community Engagement: It acts as a bridge, connecting current students, alumni, and industry professionals, creating a collaborative ecosystem.
- Inspiration: Stories of success, perseverance, and innovation fuel inspiration for budding technologists.

About the CSE (AIML) Department

The CSE (AIML) department is a hub of cutting-edge technology and research. Our curriculum is designed to prepare students for the challenges of the digital era, equipping them with expertise in:

- Machine Learning and Deep Learning
- Natural Language Processing
- Computer Vision
- Data Science and Big Data Analytics
- AI Ethics and Responsible AI

With a strong focus on hands-on learning, our department emphasizes practical knowledge through hackathons, workshops, internships, and industry collaborations. We pride ourselves on fostering a culture of curiosity, innovation, and critical thinking.

Inside This Issue

This magazine brings you:

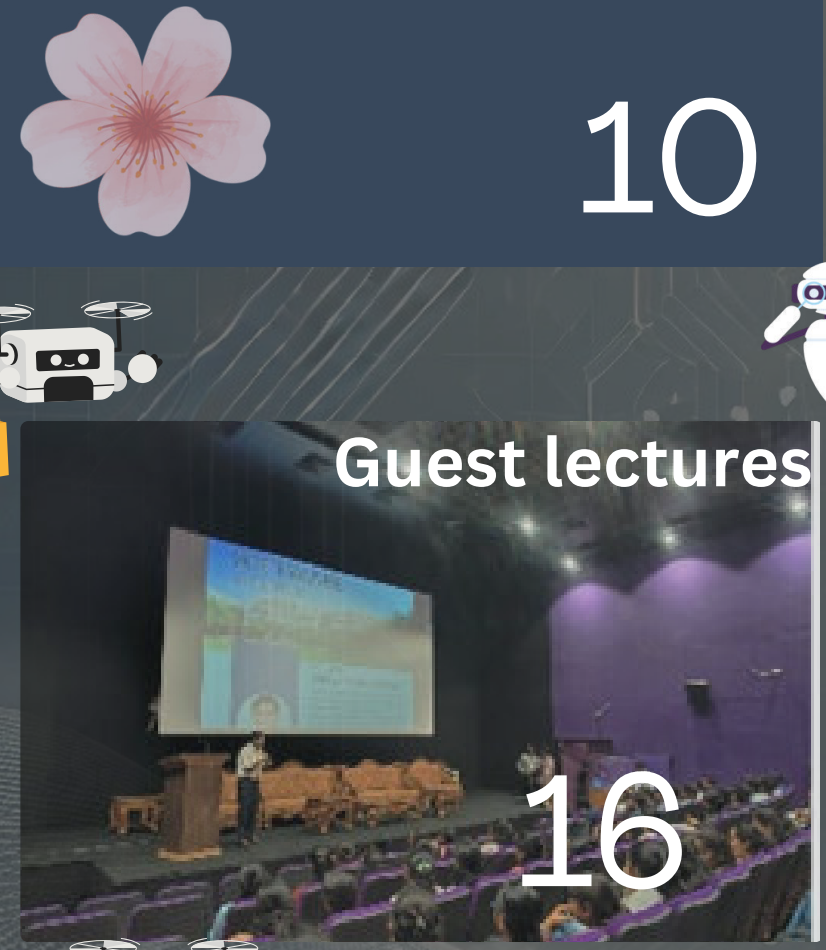
- Insights into innovative projects and research undertaken by our students.
- Updates on department events, seminars, and industry collaborations.
- Thought-provoking articles and tutorials on the latest trends in AIML.

Let's dive into the world of Artificial Intelligence and Machine Learning!

We hope this magazine inspires you, educates you, and ignites your passion for technology. Together, let's shape the future!

Prepared with dedication by the Editorial Team, CSE (AIML) Department

CONTENTS

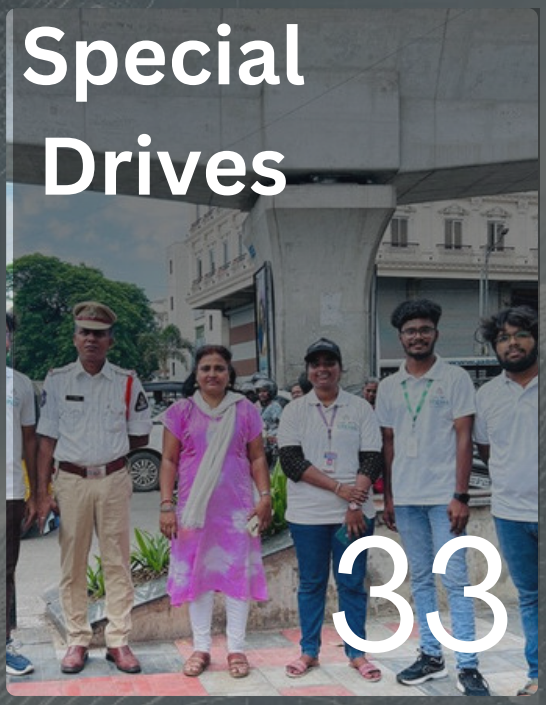



25
Codeathon

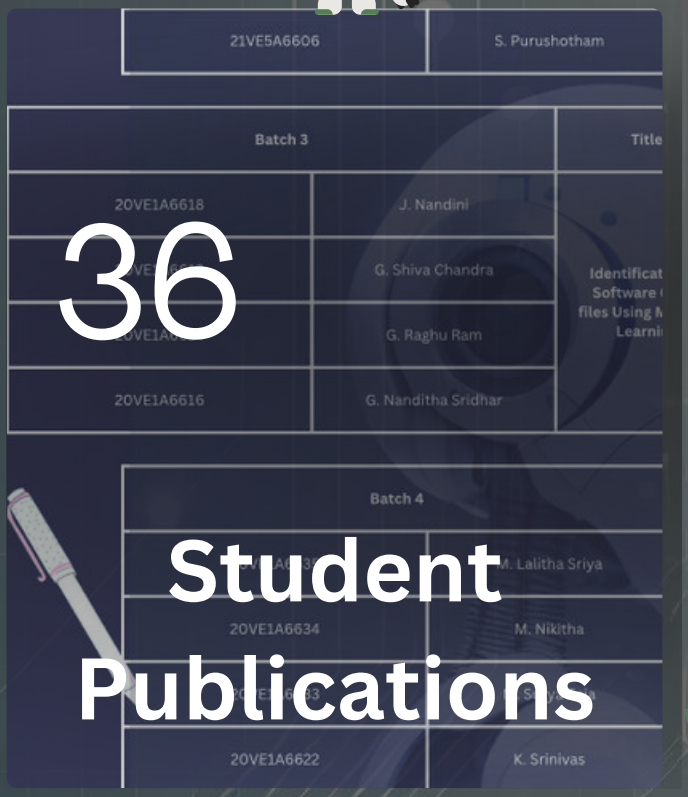

Workshops
26


29
Sports


32
NSS Events


Special
Drives
33


31
Cultural
Fests


21VE5A6606
S. Purushotham
Batch 3
20VE1A6618
J. Nandini
G. Shiva Chandra
G. Raghu Ram
20VE1A6616
G. Nanditha Sridhar
Batch 4
20VE1A6634
M. Nikitha
20VE1A6622
K. Srinivas
36
Student Publications

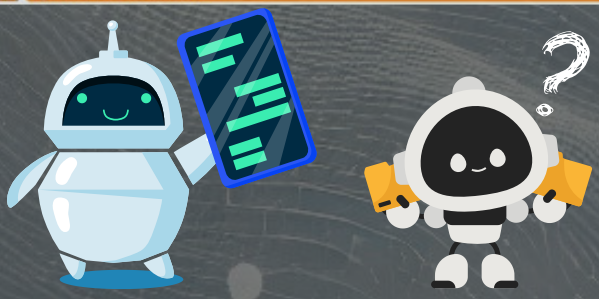

HIRING PARTNERS!
38
EXCELR
Raising Excellence
SUTHERLAND
Placements

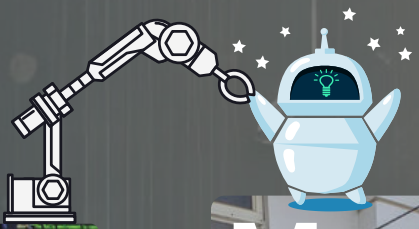

RESEARCH
43
Articles


HANDBOOK OF
ARTIFICIAL INTELLIGENCE
50
Publications
Dumpala Shanthi


46
Sunday
PHD List


55
Industrial Visits





57

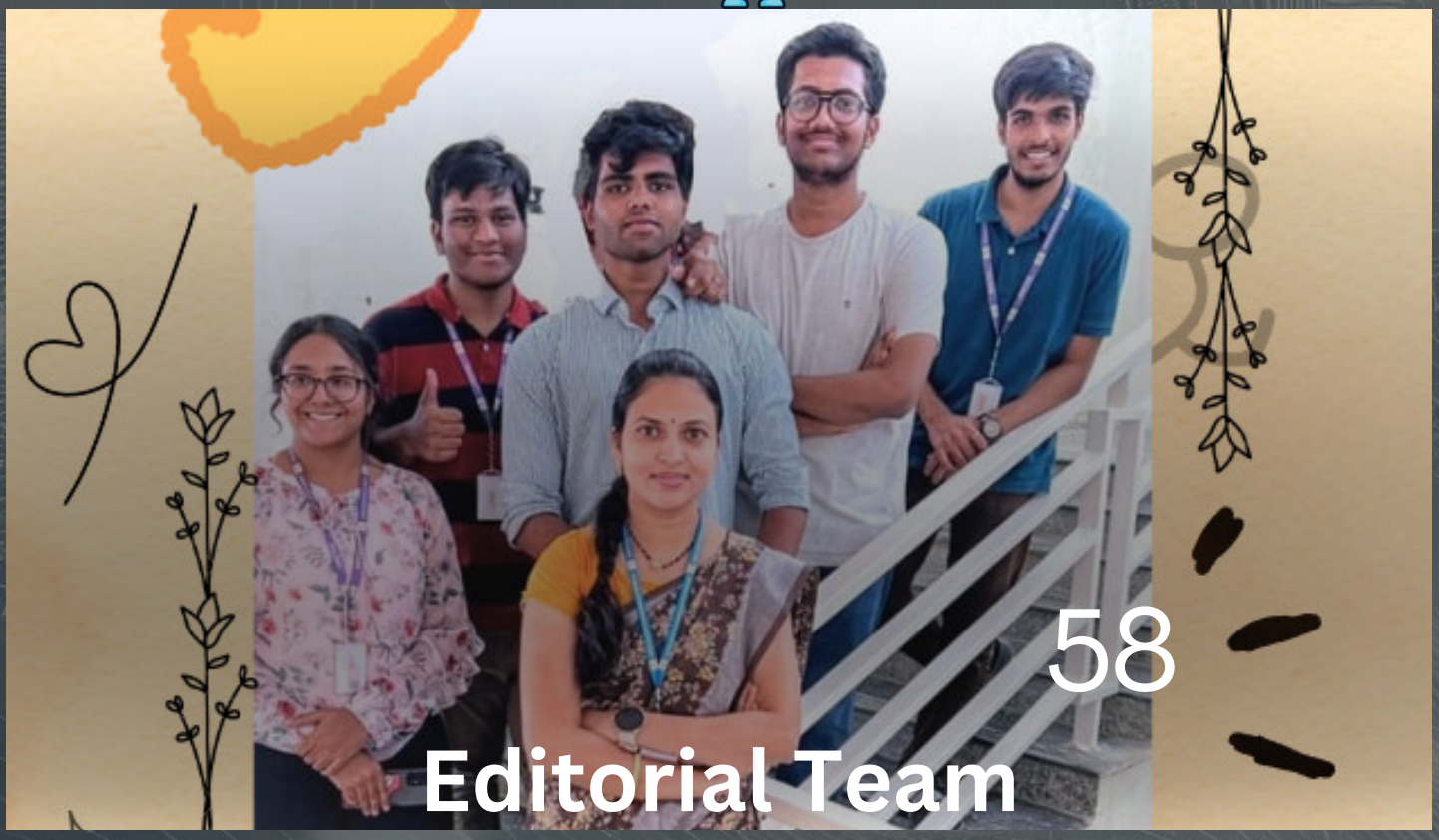
Planned Events

Memories

52

53

Signature Day



58

Editorial Team

HEAD OF DEPARTMENT

DR.A.SWATHI

Why Our Department? For me, it's about three things:

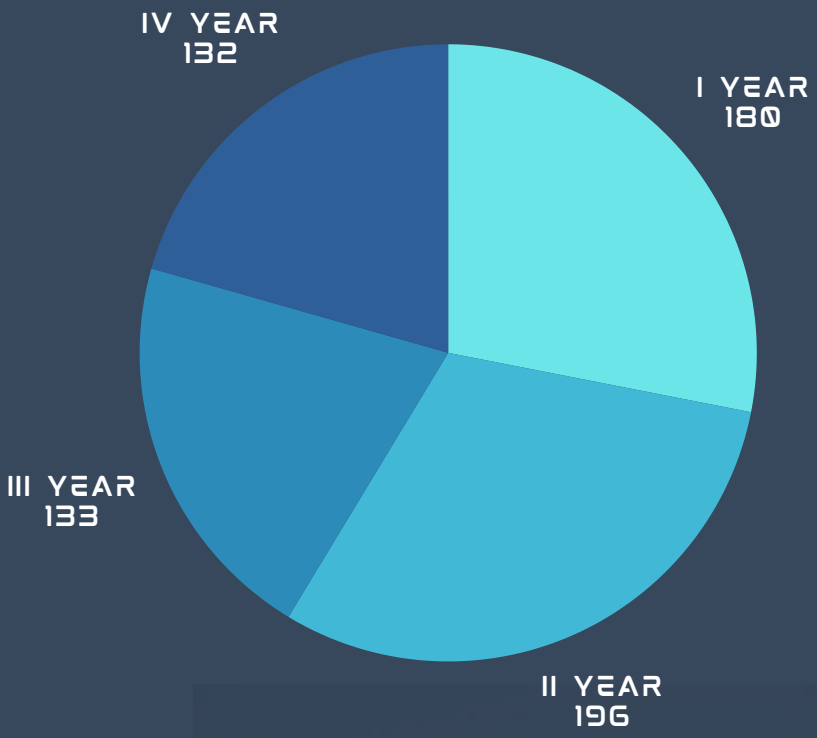
- **Faculty Excellence:** Our team is incredible. They're not just professors; they're researchers with real-world experience, passionate about sharing their knowledge and guiding students on groundbreaking research projects.

- **Industry Ready**: We don't just teach theory. Our curriculum is constantly evolving, reflecting the latest industry trends. We have strong ties with leading AI companies, ensuring our graduates are well-positioned for success.

- **A Collaborative Spirit**: AI thrives on interdisciplinary thinking. We break down barriers between departments, fostering an environment where students can develop solutions that tackle complex challenges.

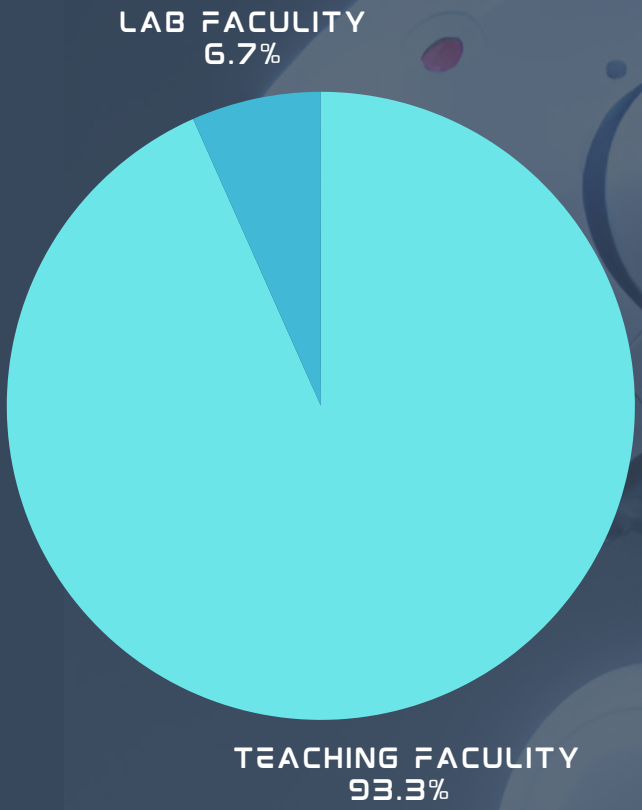
"Heading the CSE (AI & ML) department at Sreyas Institute of Engineering and Technology is a privilege I deeply cherish. AI and ML are transforming the world, and I take great pride in nurturing the next generation of innovators in this exciting field."

CSE(AI&ML) STUDENTS



The AIML (Artificial Intelligence and Machine Learning) department has witnessed consistent growth in student admissions over the years, reflecting its rising popularity and relevance in the modern tech landscape. Starting with 180 students in the first year, the numbers slightly increased to 196 in the second year. The third and fourth years have maintained steady enrollment with 133 and 132 students, respectively. This trend underscores the department's commitment to nurturing future-ready professionals in the rapidly evolving field of AI and ML.

CSE(AI&ML) DEPARTMENT FACULTY



The AIML department thrives on the strength of its exceptional faculty, comprising 28 experienced teaching staff and 2 specialized lab faculty members. Together, they ensure a holistic learning environment, blending academic rigour with practical exposure. The teaching faculty focuses on delivering in-depth knowledge of AI and ML concepts, fostering innovation, and encouraging research. Meanwhile, the lab faculty provides hands-on training with cutting-edge tools and technologies, bridging the gap between theory and application.

DECODING THE FUTURE: TOP TRENDS IN AI AND ML

The realm of Artificial Intelligence (AI) and Machine Learning (ML) is constantly evolving, pushing the boundaries of what's possible. As we move forward, several key trends are shaping the future of these transformative technologies. Let's delve into some of the most exciting advancements:

1. The Rise of Explainable AI (XAI): As AI systems become more complex, ensuring transparency and understanding of their decision-making processes is crucial. XAI techniques are being developed to shed light on how AI models arrive at their conclusions, fostering trust and responsible AI development.

2. Democratization of AI: AI and ML tools are becoming more accessible and user-friendly. Cloud-based platforms and low-code/no-code solutions are empowering individuals and businesses without extensive technical expertise to leverage the power of AI.

3. The Continued Evolution of Deep Learning: Deep learning architectures like convolutional neural networks (CNNs) and recurrent neural networks (RNNs) are undergoing further refinement. Expect advancements in areas like natural language processing (NLP) and computer vision, leading to more sophisticated AI applications.

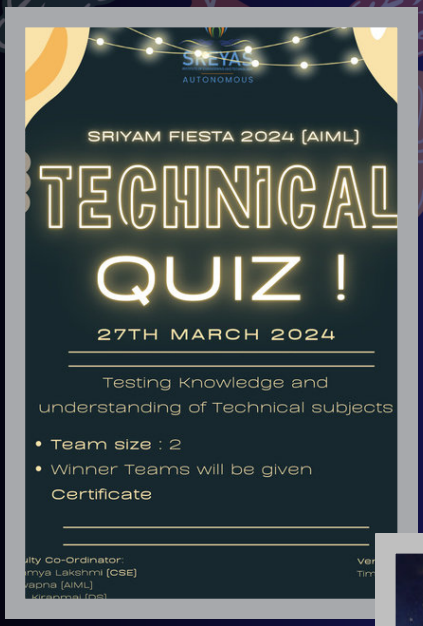
4. The Fusion of AI and the Internet of Things (IoT): The synergy between AI and IoT is creating powerful new possibilities. By analyzing data collected from interconnected devices, AI can optimize processes, predict maintenance needs, and personalize user experiences in the realm of smart homes and cities.

5. Responsible AI Development: As AI continues to integrate into society, ethical considerations are paramount. Researchers are focusing on developing AI systems that are unbiased, and fair, and mitigate potential risks associated with automation and job displacement.

The Road Ahead These trends represent a glimpse into the exciting future of AI and ML. As these technologies continue to mature, their impact will be felt across various industries, from healthcare and finance to manufacturing and entertainment. The possibilities are truly limitless.

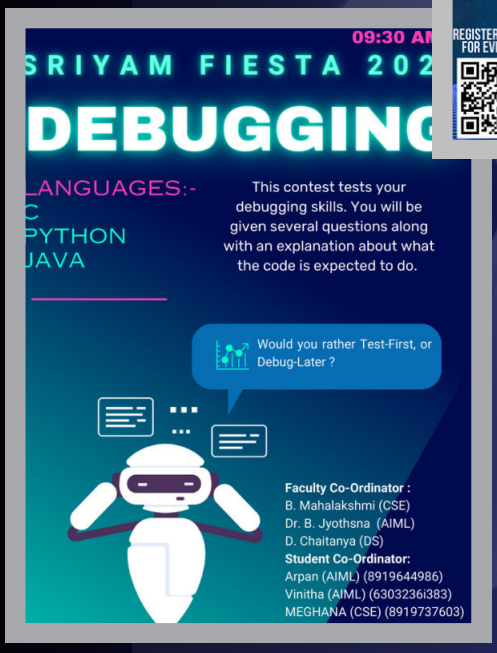
What does this mean for you? The ever-evolving landscape of AI and ML presents a wealth of opportunities. Whether you're a student, researcher, or aspiring entrepreneur, staying informed about these trends will empower you to play a role in shaping the future of AI. Explore online resources, attend workshops, and engage with the vibrant AI and ML community. The future is bright, and it's being built by those who embrace innovation and responsible technological advancement.

TECHNICAL EVENTS



TECHNICAL QUIZ

CODE-A-THON

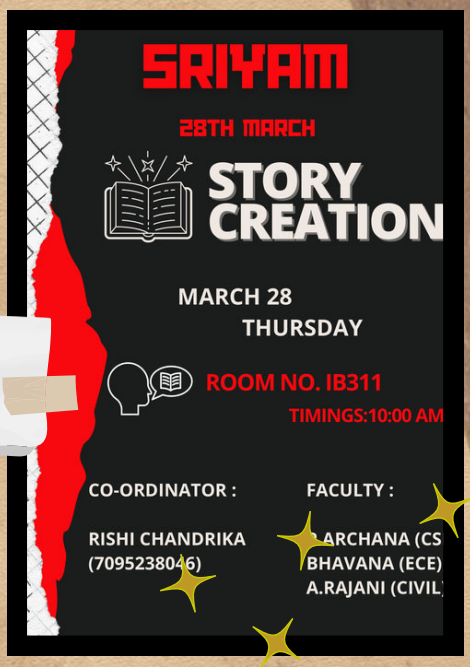


DEBUGGING

PAPER PRESENTATION

CULTURAL EVENTS

Videography

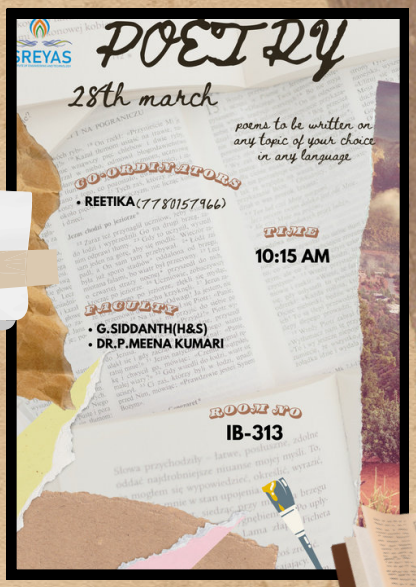


Script Writing

Drama

Talent Show

Memes



Poetry

Fabric paiting

Instrument Play

GUEST LECTURES

FUTURE TRENDS AND APPLICATION IN AI & ML

What truly set these workshops apart was the collaborative spirit they fostered. The involvement of the IEEE Sreyas Student Branch brought a unique dimension to the initiative, as it connected students with a broader community of tech enthusiasts and innovators. This collaboration not only enhanced the learning experience but also encouraged students to think beyond the classroom, preparing them to tackle challenges in the real world.

CAREER OPPORTUNITIES IN ABROAD

Gautham delivered an engaging seminar on **career opportunities**, guiding students on pathways to excel in the tech industry. His session highlighted emerging roles, required skills, and strategies for success, leaving attendees inspired and better prepared for their future careers!

GUEST LECTURE ON SE BY M.P KALIDAS

The success of these workshops is a testament to the department's vision of providing holistic education. By creating opportunities for hands-on learning, interdisciplinary collaboration, and research-oriented thinking, the CSE (AI & ML) department is shaping the next generation of leaders in AI and ML. With plans for more such initiatives in the pipeline, the department continues to inspire its students to explore, innovation.

WORKSHOP ON MACHINE LEARNING BY OU PROFESSORS

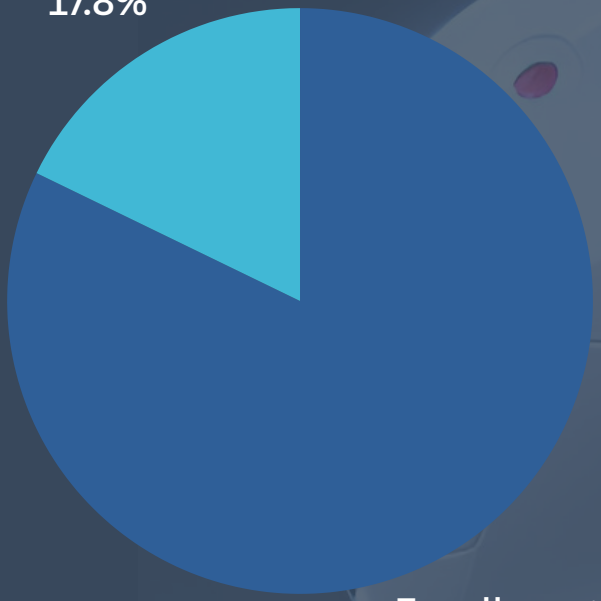
One of the highlights was a special session on research methodologies, where students learned the nuances of creating impactful research papers. The guidance provided by expert mentors equipped participants with the skills to articulate their ideas effectively and contribute to academic and professional discourse. This focus on research underscores the department's commitment to cultivating a culture of intellectual curiosity and innovation among its students.

SREYAS
INSTITUTE OF ENGINEERING AND TECHNOLOGY

Springer CCIS

AN INFORMAL GUIDE TO RUNNING A LARGE CONFERENCE IN CMT
Conference Management Toolkit
Microsoft Research

International Conference on Artificial Intelligence and Data Science (ICAIDS - 2023)

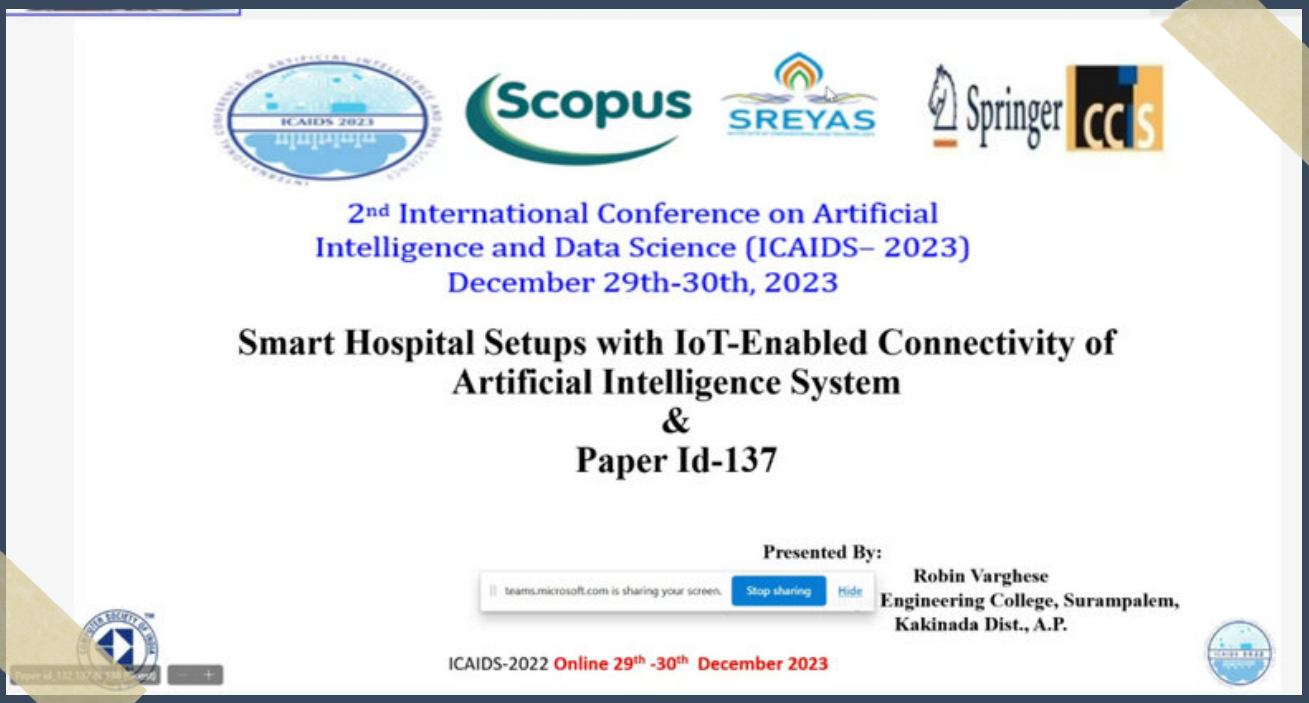


This conference is meant for researchers from academia, industries and research & development organizations all over the globe interested in the areas of Artificial Intelligence and Data Science. It will put special emphasis on the participation of PhD students, Postdoctoral fellows and other young researchers from all over the world. The conference will feature world-class keynote speakers in the main areas. We warmly welcome prospective authors to submit their latest research results to ICAIDS-2023, looking forward to meeting you at Sreyas Institute Of Engineering and Technology, Hyderabad, Telangana, India from 29th-30th September 2023

KEYNOTE SPEAKERS

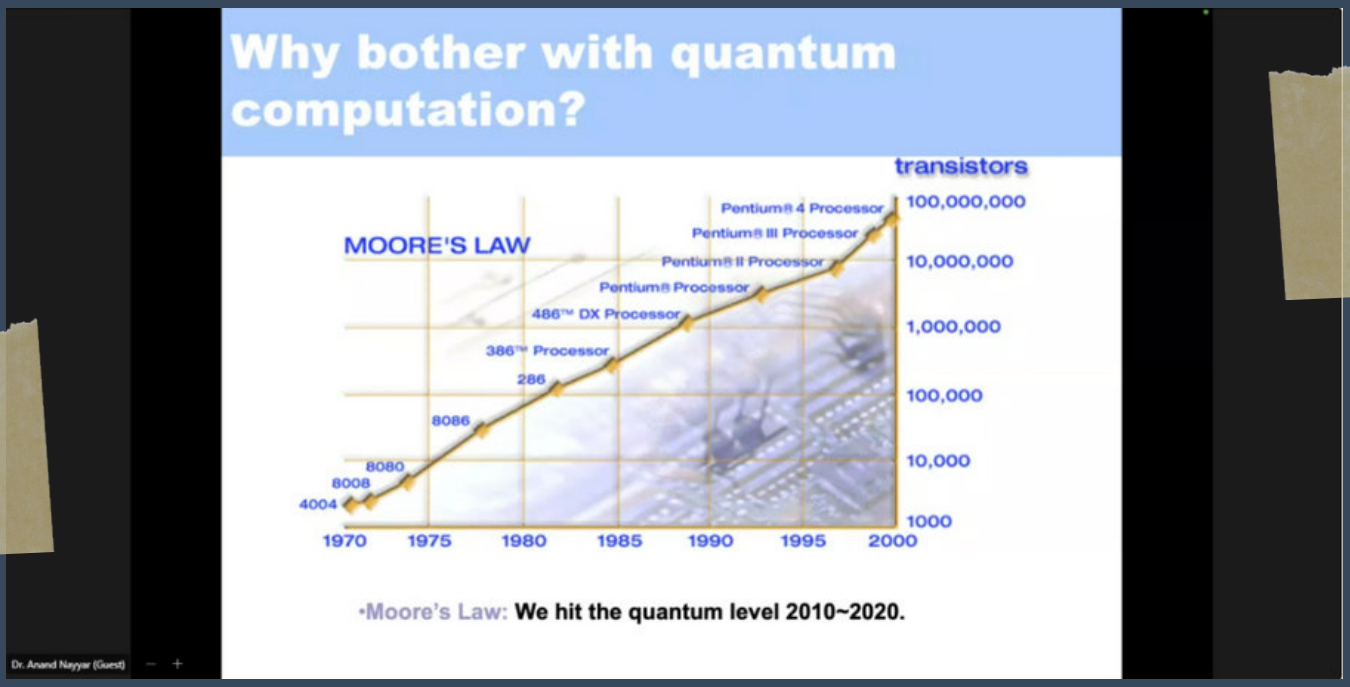
The International Conference on Artificial Intelligence and Data Science (ICAIDS-2023) will be held at Sreyas Institute Of Engineering and Technology, Hyderabad, Telangana, India from 29 to 30 September 2023. The conference will have plenary lectures followed by parallel sessions. Plenary lectures will be delivered by eminent personalities of repute to introduce the theme of the conference. The conference is to provide a platform for PG students, Researchers, Young aspiring Engineers & Academicians to present their research findings of their respective domains of knowledge and share ideas and Views.

PAPER PRESENTATIONS



"The advent of the Internet of Things (IoT) has transformed various industries, and healthcare is no exception. Smart hospitals, equipped with IoT devices, are at the forefront of this technological revolution, redefining how healthcare services are delivered and experienced."

"The advent of the Internet of Things (IoT) has transformed various industries, and healthcare is no exception. Smart hospitals, equipped with IoT devices, are at the forefront of this technological revolution, redefining how healthcare services are delivered and experienced."



"Quantum computing is emerging as one of the most transformative technologies of the 21st century. Harnessing the mysterious principles of quantum mechanics, this cutting-edge field holds the potential to solve complex problems that are beyond the reach of even the most powerful classical computers."

OpenAI's ChatGPT stands as a remarkable milestone, embodying the intersection of cutting-edge technology and human ingenuity. ChatGPT, a language model powered by advanced natural language processing (NLP) techniques, has undertaken a fascinating scholarly journey to become a tool of knowledge, creativity, and problem-solving.

AI-BLOCKCHAIN RESEARCH SCOPE

- Authenticity:

Improve trust in data integrity and, by extension, in the recommendations that AI provides. Using blockchain to store and distribute AI models provides an audit trail, and pairing blockchain and AI can enhance data security.

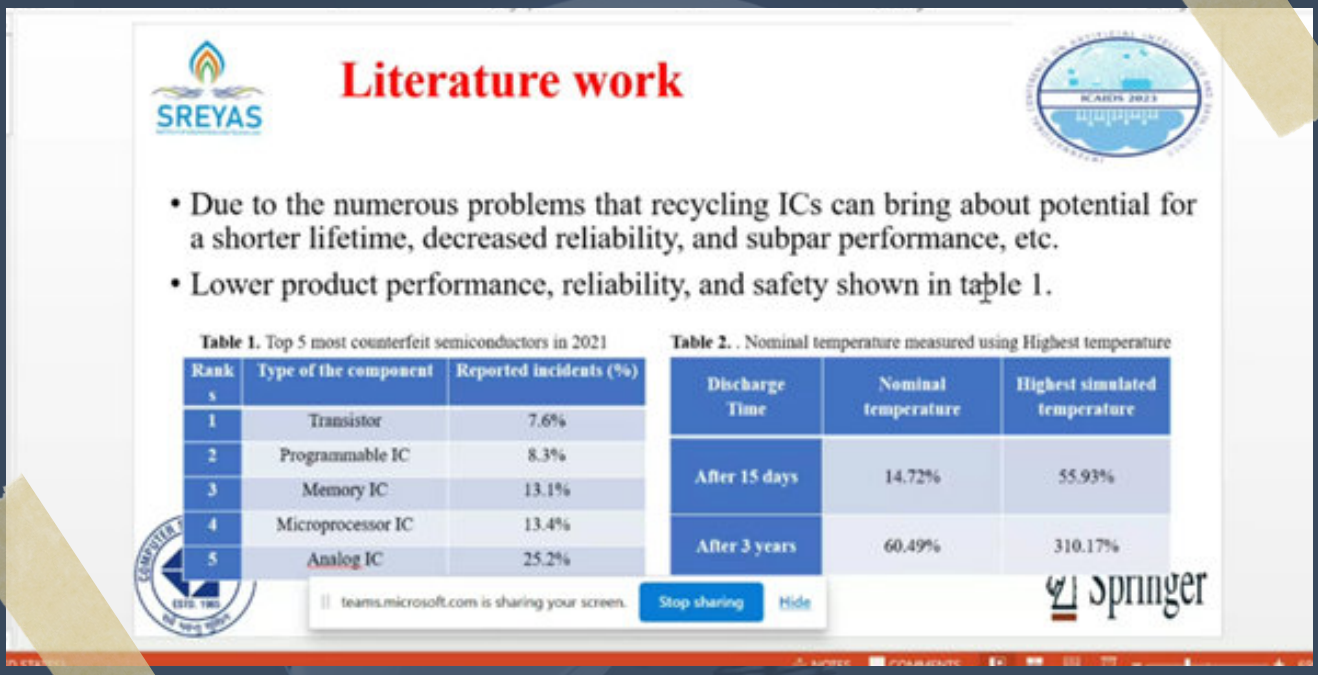
- Augmentation:

AI can rapidly and comprehensively read, understand and correlate data at incredible speed, bringing a new level of intelligence to blockchain-based business networks. By providing access to large volumes of data from within and outside of the organization, blockchain helps AI scale to provide more actionable insights, manage data usage and model sharing, and create a trustworthy and transparent data economy.

- Automation:

AI, automation and blockchain can bring new value to business processes that span multiple parties — removing friction, adding, speed and increasing efficiency. For example, AI models embedded in smart contracts executed on a blockchain

"Blockchain, known for its decentralization, transparency, and security, has evolved far beyond cryptocurrencies. Its research spans areas like scalability, energy efficiency, and healthcare applications, offering transformative potential. Despite challenges like adoption and regulation, blockchain continues to shape industries and redefine innovation."



SREYAS

Literature work

- Due to the numerous problems that recycling ICs can bring about potential for a shorter lifetime, decreased reliability, and subpar performance, etc.
- Lower product performance, reliability, and safety shown in table 1.

Table 1. Top 5 most counterfeit semiconductors in 2021

Ranks	Type of the component	Reported incidents (%)
1	Transistor	7.6%
2	Programmable IC	8.3%
3	Memory IC	13.1%
4	Microprocessor IC	13.4%
5	Analog IC	25.2%

Table 2. . Nominal temperature measured using Highest temperature

Discharge Time	Nominal temperature	Highest simulated temperature
After 15 days	14.72%	55.93%
After 3 years	60.49%	310.17%

Springer

"Literature transcends time, weaving emotions, ideas, and cultures into stories that inspire and connect us. It mirrors society, challenges norms, and sparks the imagination, shaping our understanding of the world. From poetry to prose, it offers solace, wisdom, and a voice to the unheard. Literature is not just words—it's the soul of humanity."

CSE(AI&ML) IGNITES INNOVATION:

CODEBURST and CODETHON Hackathons Recap

The CSE(AI&ML) department at Sreyas Institute of Engineering and Technology has been a hotbed of creative problem-solving thanks to their recent CODEBURST and CODETHON hackathons. These two events brought together talented students to tackle challenges using their Machine Learning (ML) and Artificial Intelligence (AI) expertise.

CODEBURST: A Spark of Brilliance CODEBURST focused on fostering innovative solutions in the exciting realm of AI. Participants were presented with real-world problems that demanded creative applications of AI techniques. The enthusiastic teams impressed the judges with their ingenuity, showcasing the immense potential of AI to address complex challenges.

CODETHON: Powering Up with Machine Learning CODETHON turned its spotlight on the power of Machine Learning. Students channelled their ML knowledge to tackle challenges that required data analysis, model building, and intelligent solutions. The innovative projects developed during CODETHON highlighted the transformative potential of ML across various industries.

Achievements that Inspire Both CODEBURST and CODETHON witnessed a remarkable display of talent and dedication. The winning teams from each hackathon not only secured recognition for their exceptional work but also motivated their peers to push the boundaries of AI and ML. The department is proud to have fostered such a vibrant environment for innovation.

Looking Ahead: A Legacy of Ingenuity The success of CODEBURST and CODETHON paves the way for a future filled with groundbreaking ideas. The CSE(AI&ML) department is committed to hosting more such events, providing students with a platform to translate their ideas into reality. These hackathons not only cultivate a passion for AI and ML but also empower students to become future pioneers in these rapidly evolving fields.

CODE-A-THON

Codeathons have emerged as a transformative platform for students to channel their creativity, sharpen their problem-solving skills, and dive deep into the world of emerging technologies. One such remarkable event, CODEBURST, epitomized the essence of innovation by focusing on Artificial Intelligence (AI) and its ability to solve real-world problems. CODEBURST brought together bright minds, passionate about technology, to engage in a high-energy, collaborative environment. Participants were presented with complex, real-world problems.

@ CODE-A-THON WINNERS

@Workshop on machine learning

To enhance practical knowledge, the department frequently invites guest lecturers and industry experts from renowned institutions and organizations. These hands-on sessions offer students the opportunity to interact with professionals, gain real-world exposure, and learn the practical implementation of AI and ML concepts. This approach bridges the gap between theoretical knowledge and its applications, making learning more comprehensive and impactful.

Collaboration with other colleges plays a vital role in expanding students' horizons. Through joint workshops, hackathons, and technical seminars, students engage with peers from different institutions, exchange ideas, and develop a broader understanding of AI innovations. These collaborations foster a culture of shared learning and innovation, preparing students to tackle real-world challenges.

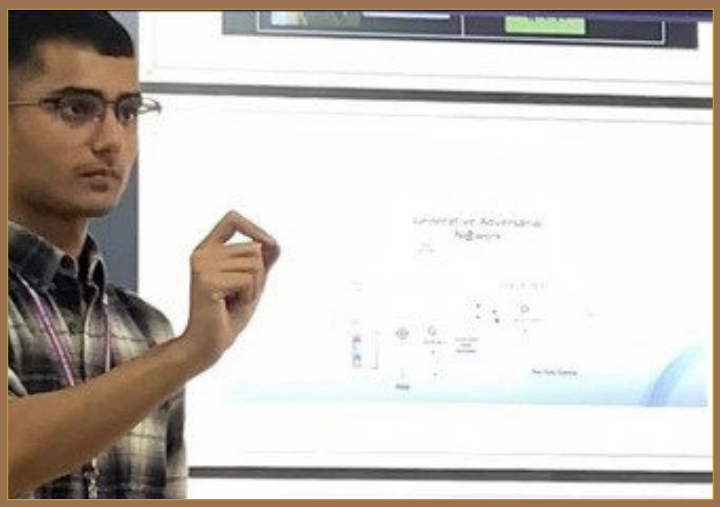
@nasa space apps hackthon

Hackathons and Ideathons

9 CSE (AIML) students shone in hackathons and code-a-thons, creating AI-driven solutions for real-world challenges. Their innovative ideas and teamwork earned recognition, inspiring others to embrace such opportunities and excel!

Internships

A total of **56 students from the CSE (AIML)** department gained hands-on experience through internships, with **4 completing them online** and **52 opting for offline** opportunities. These experiences enhanced their technical skills and prepared them for industry challenges, showcasing their commitment to growth and learning!



Workshops

10 students from the CSE (AIML) department attended workshops outside the campus, exploring advanced concepts and emerging technologies. These experiences enriched their knowledge and provided valuable insights into industry practices, empowering them to stay ahead in the tech world!

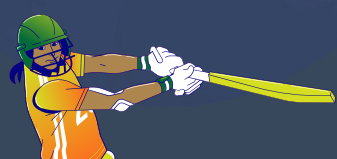
CSE(AI&ML) ACES: BEYOND THE CODE ON THE PLAYING FIELD

The CSE(AI&ML) department at Sreyas Institute of Engineering and Technology isn't just about algorithms and neural networks. These brainy students are proving their prowess on the field as well, particularly excelling in cricket and football. Dominating on the Pitch: Cricket Champions The CSE(AI&ML) department's cricket team has become a force to be reckoned with. Their recent achievements include [mention specific achievements, e.g., winning the inter-departmental tournament, and topping the institute cricket league]. Their ability to strategize, adapt, and execute under pressure – skills honed in their coding pursuits – translates remarkably well to the cricket field.

Football Finesse: Scoring High on the Ground The football team of the CSE(AI&ML) department isn't lagging either. Their [mention specific achievements, e.g., reaching the finals of a major tournament, maintaining an unbeaten streak for some time] showcase their agility, teamwork, and a never-give-up attitude – all essential qualities for both coding challenges and football matches.

A Well-Rounded Education: Balancing Academics and Athletics The success of these students on the sports field is a testament to Sreyas Institute's commitment to a well-rounded education. The department fosters an environment that encourages students to excel not just in academics but also in extracurricular activities, promoting a healthy balance and a spirit of sportsmanship.

Future All-Stars: Encouraging a Winning Culture The achievements of the CSE(AI&ML) department's cricket and football teams are a source of immense pride for the institute. These victories inspire other students to pursue their athletic passions while excelling in academics. We can expect to see even more sporting success from these future all-stars as they continue to shine both on and off the field.



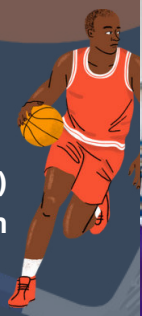
SREYAS SPORTS TEAMS

Football Team

Let's shine a spotlight on the triumphant victories of our CSE (AI&ML) department's football team! Their dedication and teamwork deserve recognition in the magazine.

Basketball

Hail the champions! Sreyas Institute's CSE (AI&ML) basketball team aces the court with a winning season.

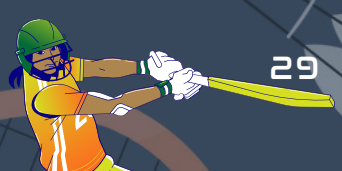


Kabaddi Team

Sreyas Institute roars with pride! The CSE (AI&ML) Kabaddi team conquers the mat with an impressive winning streak.

Cricket Team

Strike out the competition! Sreyas Institute's CSE (AI&ML) cricket team smashes their way to victory.



CSE(AI&ML) DEPARTMENT: WHERE CODE MEETS CULTURE

The CSE(AI&ML) department at Sreyas Institute of Engineering and Technology is shattering stereotypes. While their coding prowess is undeniable, these students are proving themselves to be well-rounded individuals with a vibrant cultural side. Let's delve into their impressive achievements beyond the realm of algorithms and artificial intelligence.

From Algorithms to Applause: A Showcase of Talent The CSE(AI&ML) department has been a constant presence in Sreyas Institute's cultural events. Students have actively participated in dance competitions, enthralled audiences with their musical abilities, and brought the house down with their theatrical performances. Their dedication and talent have not gone unnoticed, with several students bagging top prizes and earning recognition for their artistic flair.

Breaking Barriers, Building Bridges These cultural activities serve as more than just a platform for showcasing talents. They foster a sense of camaraderie within the department, allowing students to bond over shared passions beyond their academic pursuits. This collaborative spirit transcends departmental boundaries as well, as CSE(AI&ML) students collaborate with peers from other departments during cultural events, creating a truly inclusive and vibrant atmosphere.

A Well-Rounded Education: Mind, Body, and Creativity The active participation of CSE(AI&ML) students in cultural activities underscores Sreyas Institute's commitment to providing a well-rounded education. By encouraging students to explore their creative sides, the institute fosters the development of crucial life skills such as teamwork, communication, and time management. These skills, honed on the cultural stage, will undoubtedly benefit them in their future endeavours, both professional and personal.

A Glimpse into the Future The active participation of CSE(AI&ML) students in cultural activities is a testament to their well-rounded personalities. Sreyas Institute can be proud of nurturing such talented individuals who are sure to leave their mark on the world, not just with their coding abilities, but also with their creativity and zest for life. As Sreyas Institute looks towards the future, one can only expect even more impressive cultural contributions from the ever-evolving CSE(AI&ML) department.

CSE(AI&ML) DEPARTMENT: CULTURE FEST

The department organizes cultural fests that foster creativity, teamwork, and community, offering students a break from academics. These events showcase talents in music, dance, theater, and art, promoting holistic development.

The CSE (AIML) department came together to celebrate the vibrant festival of Bathukamma, showcasing the rich culture and traditions of Telangana. Students and faculty enthusiastically participated, decorating floral arrangements and engaging in traditional songs and dances. The event fostered a sense of unity and joy, bringing cultural diversity to life on campus. It was a beautiful reminder of the importance of cherishing our heritage while embracing innovation!

Cultural fests enhance students' soft skills, essential for personal and professional success. They promote collaboration, leadership, and communication, ensuring students are industry-ready and prepared for diverse environments.

CSE(AI&ML) DEPARTMENT: BEYOND CODE, BUILDING A BETTER FUTURE

NSS EVENTS

The Department of AI & ML at Sreyas Institute of Engineering and Technology is known for nurturing exceptional tech talent. However, their dedication extends far beyond the realm of algorithms and artificial intelligence. These students are also actively involved in the National Service Scheme (NSS), demonstrating a commitment to social responsibility and community development.

From Code to Collaboration: Embracing NSS CSE(AI&ML) students consistently participate in various NSS initiatives. From tree plantation drives and cleanliness campaigns to awareness programs on social issues, they actively contribute to creating a positive impact. Their participation brings a unique blend of technical expertise and youthful zeal to every event.

Bridging the Gap: Technology for Social Good The involvement of CSE(AI&ML) students adds a valuable technological dimension to NSS activities. Their knowledge of AI and ML can be harnessed to develop innovative solutions for social challenges. These students can potentially create apps or tools to raise awareness on critical issues or streamline volunteer efforts.

Beyond Academics: Building Well-Rounded Individuals Participation in NSS activities fosters a sense of social responsibility and civic awareness in CSE(AI&ML) students. It allows them to connect with the community on a personal level, understand real-world problems, and develop valuable life skills such as teamwork, communication, and leadership. These experiences complement their academic pursuits, shaping them into well-rounded individuals prepared to make a difference in the world.

A Shining Example: Inspiring Future Generations The active participation of CSE(AI&ML) students in NSS serves as a shining example for their peers. It demonstrates that a successful career in technology can be complemented by a strong sense of social responsibility. This inspires future generations of students to embrace not only technical excellence but also a commitment to making the world a better place.

Looking Forward: A Legacy of Service The dedication of CSE(AI&ML) students to NSS activities is a testament to Sreyas Institute's commitment to holistic education. The department's emphasis on social responsibility ensures that its graduates are not just technically skilled but also possess the empathy and drive to contribute positively to society. As Sreyas Institute looks towards the future, one can expect even more active participation from the CSE(AI&ML) department in NSS initiatives, leaving a lasting legacy of service and social impact.

LEVEL UP YOUR AI & ML SKILLS

Recap of CSE(AI&ML) Department Workshops with IEEE Sreyas Student Branch

The CSE(AI&ML) department, in collaboration with the IEEE Sreyas Student Branch, recently concluded a successful series of workshops focusing on Machine Learning (ML), Artificial Intelligence (AI), and the art of crafting impactful research papers. These workshops provided a valuable platform for students to deepen their understanding of these in-demand fields and gain practical skills.

Demystifying Machine Learning and Artificial Intelligence The workshops on ML and AI delved into the core concepts of these transformative technologies. Participants gained insights into various ML algorithms, explored the capabilities of AI systems, and learned how these technologies are shaping the future. The interactive sessions, led by experienced faculty members, equipped students with the foundational knowledge to navigate the exciting world of AI and ML.

Mastering the Art of Research Paper Writing In today's research-driven environment, the ability to effectively communicate findings is paramount. The workshop on research paper writing provided students with a roadmap to crafting compelling and well-structured papers. Experts from the department guided participants through the entire process, from selecting a topic to formulating a strong thesis statement, conducting research, and presenting data clearly and concisely.

Collaboration for Success The collaboration between the CSE(AI&ML) department and the IEEE Sreyas Student Branch proved to be a winning formula. The workshops benefitted from the department's expertise in AI and ML, while the student branch's outreach efforts ensured a wide audience of enthusiastic participants. This collaborative approach fosters a vibrant learning environment and empowers students to connect with like-minded individuals passionate about AI and ML.

Looking Ahead: Building on the Momentum The success of these workshops paves the way for future collaborative efforts. The CSE(AI&ML) department and the IEEE Sreyas Student Branch are committed to providing students with continuous learning opportunities. We can expect more engaging workshops shortly, delving deeper into specific AI and ML applications and exploring cutting-edge research advancements. This article serves as a snapshot of the insightful workshops organized by the CSE(AI&ML) department and the IEEE Sreyas Student Branch. By providing a platform for knowledge sharing and skill development, these initiatives empower students to become future leaders in the dynamic fields of AI and ML.

SIET'S CSE(AI&ML): A HUB OF INNOVATION

Sreyas Institute of Engineering and Technology (SIET) has been making significant strides in the fields of Artificial Intelligence (AI) and Machine Learning (ML). The institute's Computer Science Engineering-Artificial Intelligence and Machine Learning branch has consistently produced exceptional research, culminating in numerous paper publications in prestigious journals and conferences. A Culture of Innovation SIET's commitment to fostering a culture of innovation and research excellence is evident in the achievements of its students. Under the guidance of experienced faculty members, students are encouraged to explore cutting-edge AI and ML techniques and apply them to real-world problems. This collaborative environment has led to the development of groundbreaking research projects that have garnered attention from the academic and industry communities.

Key Research Areas The students of SIET, AI and ML branch have made notable contributions in several key research areas, including:

Natural Language Processing (NLP): Developing advanced NLP models for tasks such as sentiment analysis, text summarization, and machine translation. Computer Vision: Creating innovative computer vision algorithms for object detection, image recognition, and medical image analysis. Deep Learning: Exploring the potential of deep learning architectures for various applications, including autonomous systems, healthcare, and finance. Reinforcement Learning: Developing intelligent agents that can learn from their interactions with the environment to optimize their behaviour.

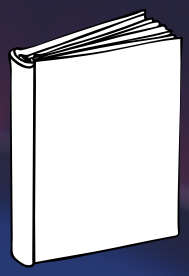
Recent Publications The institute's students have had their research papers published in top-tier journals and conferences, including:

Journal of Artificial Intelligence Research IEEE Transactions on Neural Networks and Learning Systems International Conference on Machine Learning Neural Information Processing Systems

Impact and Future Outlook The research conducted by SIET's AI and ML students has the potential to make a significant impact on society. By addressing real-world challenges and developing innovative solutions, these students are contributing to the advancement of AI and ML technology. As the field continues to evolve, SIET's commitment to research excellence will ensure that its students remain at the forefront of AI and ML innovation. In conclusion, Sreyas Institute of Engineering and Technology is a leading institution in the field of AI and ML. The institute's students have demonstrated exceptional research capabilities, resulting in numerous publications in prestigious journals and conferences. With a focus on innovation and collaboration, SIET is well-positioned to continue producing groundbreaking research and driving advancements in the field of AI and ML.

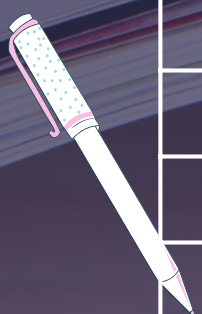
CSE(AI&ML) STUDENT PUBLICATIONS

Batch 1		Title	Published Journal Name
20VE1A6677	Dhritisree Chhabra	Identification of Phishing URL's and Websites using ML	International journal of Scientific Research in Eng & Management (Ijsrem) dec 2023
20VE1A6679	Gampa Shashi Preetham		
20VE1A6680	Gopaluni Ketan		
20VE1A6682	Hanumandha Pavani		



Batch 8		Title	Published Journal Name
21VE5A6603	J. Srinivas	Agriculture Guider Chatbot	International journal of Scientific Research in Eng & Management (Ijsrem) dec 2023
21VE5A6604	N. Rakesh		
21VE5A6605	P. Pooja		
21VE5A6606	S. Purushotham		

Batch 3		Title	Published Journal Name
20VE1A6618	J. Nandini	Identification of Software Clone files Using Machine Learning	International journal of Scientific Research in Eng & Management (Ijsrem) dec 2023
20VE1A6613	G. Shiva Chandra		
20VE1A6614	G. Raghu Ram		
20VE1A6616	G. Nanditha Sridhar		



Batch 4		Title	Published Journal Name
20VE1A6635	M. Lalitha Sriya	Object Recognition in AI	International journal of Scientific Research in Eng & Management (Ijsrem) dec 2023
20VE1A6634	M. Nikitha		
20VE1A6633	M. Surya Teja		
20VE1A6622	K. Srinivas		

Batch 5		Title	Published Journal Name
20VE1A6675	Deepesh Ahuja	Leaf Disease Prediction	International journal of Scientific Research in Eng & Management (Ijsrem) dec 2023
20VE1A6666	B. Venu		
20VE1A6667	B. Anvesh		

Batch 6		Title	Published Journal Name
20VE1A66A1	P. Sravani	Counterfeit Currency Detection using Machine Learning	International journal of Scientific Research in Eng & Management (Ijsrem) dec 2023
20VE1A66A3	P. Yashwantini		
20VE1A6699	P. Sai Vihal		
20VE1A66A0	P. Abhilash		

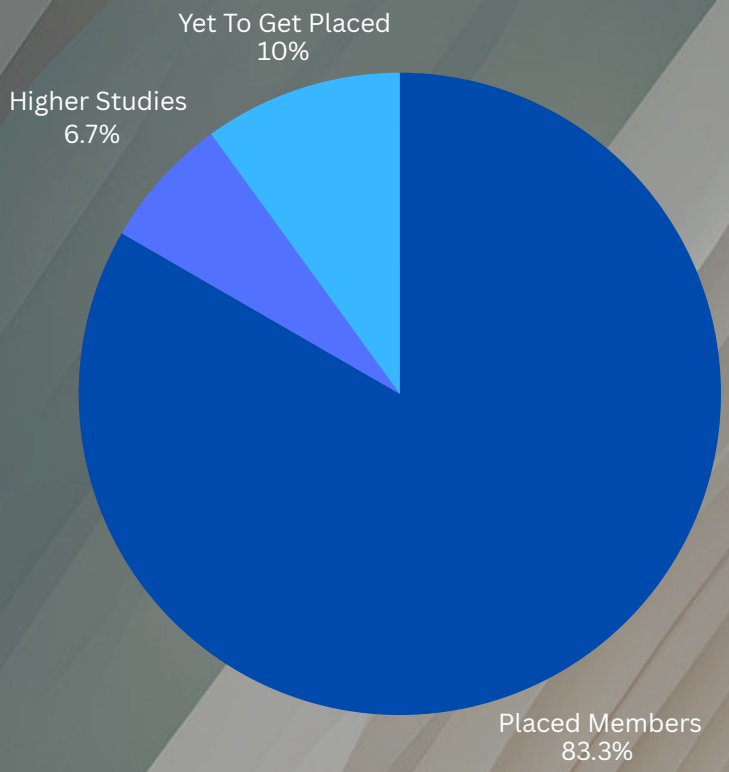
Batch 7		Title	Published Journal Name
20VE1A6608	Ch. Akshay	Detection of Fake Review	International journal of Scientific Research in Eng & Management (Ijsrem) dec 2023
20VE1A6609	C. Ritesh		
20VE1A6610	D. Sai Charith		
20VE1A6611	D. Tarun		

Batch 9		Title	Published Journal Name
20VE1A6660	V. Nikitha	Cryptocurrency prive forecaster	Quest Journal of Software Engineering and Simulation 2023
20VE1A6659	V. Rushika		
20VE1A6658	V. Greeshma		
21VE5A6601	Ch. Mahitha		

SREYAS INSTITUTE'S CSE (AI&ML) STUDENTS: SOARING HIGH WITH STELLAR PLACEMENTS!

The Sreyas Institute of Engineering and Technology is proud to celebrate the remarkable achievements of its Computer Science and Engineering (Artificial Intelligence & Machine Learning) students in the recent placement season. These exceptional individuals have secured placements in top-tier companies, landing coveted positions with impressive salary packages. This year's batch has truly exemplified excellence. With a placement rate exceeding 70%, a significant portion of our AI&ML graduates have embarked on promising careers at leading names in the industry. From tech giants like Amazon and Microsoft to renowned firms like Accenture, these students are poised to significantly impact the ever-evolving field of AI and machine learning.

The highest package offered this year stands tall at an impressive 18 LPA, a testament to the exceptional skills and talent nurtured within our AI&ML program. This, coupled with an average package exceeding 5 LPA, reflects the strong industry demand for graduates equipped with a deep understanding of AI and its applications. This success is a culmination of the unwavering dedication of both our students and faculty. The rigorous curriculum, combined with a focus on practical learning and industry-aligned projects, has prepared our graduates to excel in the competitive world. We are incredibly proud of the accomplishments of our CSE (AI&ML) students. Their hard work, perseverance, and exceptional talent have not only secured them promising futures but also brought immense recognition to the Sreyas Institute. We do not doubt that they will continue to thrive in their careers and make significant contributions to the ever-advancing field of Artificial Intelligence. This is just the beginning of their exciting journey. We, at Sreyas Institute, extend our heartfelt congratulations to the graduating class and wish them the very best in their future endeavours!



Out of 180 students in the Computer Science and Engineering (AIML) batch, 150 have secured placements in top tech companies, highlighting the increasing demand for AI and ML professionals. This achievement reflects the student's hard work and the department's commitment to providing cutting-edge education. The CSE (AIML) program equips students with the skills to thrive in a rapidly evolving industry. For those still seeking opportunities, the future remains bright with endless possibilities in AI and ML. This success serves as an inspiration, demonstrating that commitment and continuous learning lead to exciting career opportunities.

HIRING PARTNERS!

EXCELR
Raising Excellence

VIEB
LAUNCH

SUTHERLAND

Academor

accenture

NALSOFT
Your Partner for Enterprise Applications

ITC INFOTECH
Business-friendly Solutions

24/7 365

Teachnook

FORGE ALUMNUS
Accelerating Futures
Unlock Urself...

ASSETSENSE
Elevating Performance

Mphasis
The Next Applied

QSpiders

TECHNOLOGICS
INNOVATE | TRANSFORM | SUCCEED

Sreyas Institute's CSE (AI&ML) Students: High Placements!

Koyugura Siddhardha
9 LPA

A Journey of Gratitude

As I pen down this milestone moment of securing the highest package, my heart overflows with gratitude for the Sreyas Institute of Engineering and Technology. This institution has been more than just a place of education—it has been my foundation for growth and success. The supportive environment, coupled with an unwavering belief in my potential, has transformed my dreams into reality. To every aspiring student, I want to say that your journey begins here, at Sreyas.

Dream Big, Work Hard

Success, I have learned, starts with a dream. When I walked into Sreyas, my aspirations were high, but so were my doubts. However, with every challenge I faced and every milestone I crossed, I realized that no dream is unattainable if backed by hard work and perseverance. Securing the highest package is not just a personal achievement; it is proof that dedication and consistency can turn even the loftiest ambitions into tangible success.

K Akshitha Ravinder
7 LPA

Naveen Narri
7 LPA

The Power of Support at Sreyas

What truly sets Sreyas apart is its unwavering commitment to student success. The faculty's mentorship, the career development cell's structured training programs, and the countless resources provided have played a vital role in shaping my journey. The institution didn't just focus on academics but also prioritized overall development, helping me build the confidence and skills to shine in the competitive world. To my fellow students: leverage every opportunity that comes your way at Sreyas—it's a stepping stone to greatness.

CSE(AI&ML) ROLL OF HONOUR

The Department of CSE (AI & ML) proudly celebrates the outstanding achievements of our students, whose dedication and curiosity continue to elevate the academic and cultural spirit of the department. This year has witnessed remarkable performances across academics, research, innovation, and extracurricular pursuits, reflecting the true potential of future technologists and problem-solvers.

Our students have excelled in national-level hackathons, competitive coding events, and research forums, consistently showcasing creativity and technical mastery. Many have published impactful research papers, secured prestigious internships, and contributed to projects that push the boundaries of artificial intelligence and machine learning. Their accomplishments stand as an inspiration to their peers and a testament to the quality of learning within the department.

We extend heartfelt congratulations to every achiever featured in this Roll of Honour. Their hard work and perseverance strengthen the legacy of our department and motivate us to aim even higher in the years to come.

RANK	**Roll No.**	**Name of the Student**	**CGPA**
1	20VE1A6660	VEMULA NIKITHA	8.66
2	20VE1A6665	BAKARLA KRISHNAVENI	8.38
3	20VE1A6642642	POSHANI RAKESH ANAND	8.33

DEPARTMENT ARTICLES

THE RISE OF EXPLAINABLE AI (XAI) IN HEALTHCARE - A DEEPER LOOK

XAI Techniques in Practice: The article mentions LIME, counterfactual explanations, and model-agnostic methods as XAI techniques. Here's a breakdown of how they work

LIME (Local Interpretable Model-Agnostic Explanations): This technique focuses on a specific prediction made by an AI model. LIME creates a simple explanation model around that specific prediction, highlighting the data points in the patient's medical history that most significantly influenced the AI's decision.

Counterfactual explanations: XAI can generate hypothetical scenarios where a doctor changes a patient's medical record slightly. By comparing how the AI model's output changes with these modifications, doctors can gain a better understanding of how the model reasons and arrives at its conclusions.

Model-agnostic methods: These techniques, like SHAP (Shapley Additive exPlanations), don't require knowledge of the inner workings of the AI model itself. SHAP analyzes how different features in a patient's medical data contribute to the model's prediction, providing a more general understanding of the model's decision-making process.

The Benefits of XAI in Action: Improved doctor-patient communication: With XAI, doctors can explain AI-driven recommendations to patients clearly and understandably. This fosters trust and empowers

DANIEL DOMINIC SAVIO KENNEDY CSE(AIML)

patients to participate actively in their healthcare decisions. Early detection of bias: XAI techniques can help identify potential biases in AI models used for medical diagnoses or treatment recommendations.

Beyond the Techniques: The Broader Impact of XAI The article discussed specific XAI techniques. Let's explore the broader impact of XAI on healthcare.

Increased trust in AI-powered diagnostics: With XAI, healthcare professionals can understand the rationale behind AI's recommendations. This transparency builds trust in AI tools and encourages broader adoption for diagnostics, potentially leading to earlier and more accurate diagnoses. Improved regulatory landscape: XAI can facilitate the development of clear regulatory frameworks for AI in healthcare.

CAN AI HELP US ACHIEVE CLIMATE CHANGE GOALS?

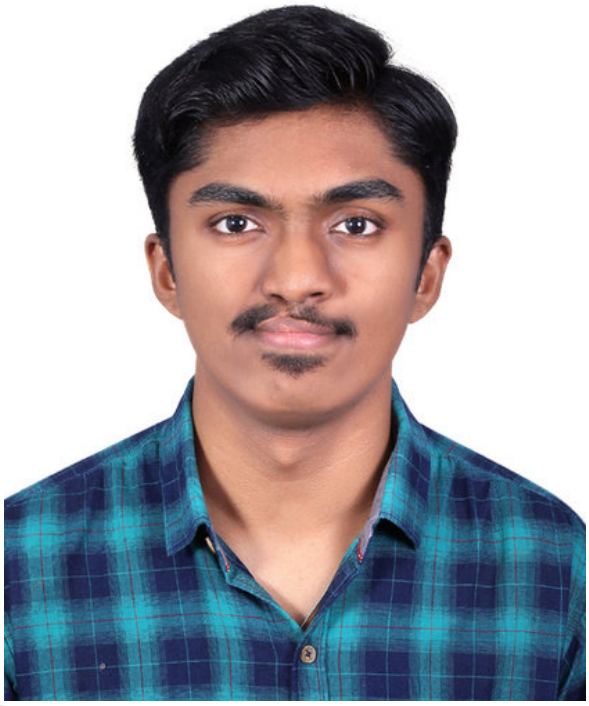
Beyond the Buzzwords: This article dives deeper into the specific applications mentioned. Let's explore how AI/ML can be implemented.

Addressing the Challenges: The article mentions data bias, energy consumption, and transparency as key challenges. Here's a more detailed look at how to address them

Optimizing renewable energy systems: AI can not only forecast weather patterns but also predict energy demand based on historical data and real-time factors. This allows for more efficient distribution of renewable energy sources like solar and wind power, reducing reliance on fossil fuels.

AI-powered smart grids can automatically adjust energy flow based on real-time needs, minimizing power outages and maximizing grid stability. Developing sustainable materials: ML algorithms can analyze vast datasets on material properties, including composition, manufacturing processes, and environmental impact.

This allows for faster discovery of sustainable alternatives for various applications. For instance, AI can identify materials with superior energy efficiency for building insulation or lighter materials for fuel-efficient vehicles. Enhancing climate modelling:



AMRIT CSE(AIML)

AI can process complex climate data, including atmospheric conditions, ocean currents, and greenhouse gas concentrations. This leads to more accurate climate models, allowing scientists to make better predictions about future climate scenarios.

Data bias: Training data for AI models should be carefully curated to represent the diversity of the environment we're trying to model. This includes factors like geographical variations and historical climate trends. Techniques like data augmentation can be used to create more comprehensive training datasets.

THE RISE OF GENERATIVE AI: FROM ARTISTIC EXPRESSION TO SCIENTIFIC DISCOVERY

S. KUSUMA
CSE(AIML)

Generative AI, a burgeoning subfield of machine learning, has captured the imagination of researchers and the public alike. By learning from vast datasets of text, code, or images, generative models can create entirely new content, pushing the boundaries of creative expression and scientific exploration. This article delves into the exciting potential of generative AI and explores its impact on various domains.

Unleashing Artistic Creativity: Generative AI algorithms can generate stunning visuals, compose music with human-like qualities, and even write different kinds of creative text formats like poems, scripts, or musical pieces. This empowers artists to explore new avenues of creative expression by collaborating with AI models or using them as a source of inspiration.

Revolutionizing Drug Discovery: Generative AI can be used to design novel molecules with specific properties, accelerating the drug discovery process. By analyzing vast chemical databases, AI models can identify potential drug candidates that may be effective against specific diseases. This significantly reduces the time and resources traditionally required for drug development.

Advancing Material Science: Generative AI can be used to design new materials with superior properties, such as lighter yet stronger alloys or more efficient solar panels. By simulating the behavior of materials at an atomic level, AI can predict how different combinations of elements will interact and suggest novel material compositions with desired characteristics.

Challenges and Ethical Considerations: Despite its immense potential, generative AI presents challenges that need to be addressed:

Bias in Training Data: Generative models inherit biases present in the data they are trained on. This can lead to the creation of content that is discriminatory or reinforces existing stereotypes. Careful data curation and techniques to mitigate bias are crucial.

Ownership and Copyright: As AI models generate creative outputs, questions arise regarding ownership and copyright. Developing clear legal frameworks for AI-generated content is essential.

CSE(AI&ML) FACULTY: CHAMPIONS OF LIFELONG LEARNING

The world of AI and ML moves at a breakneck pace. At Sreyas Institute of Engineering and Technology's CSE(AI&ML) department, the faculty understands the importance of staying ahead of the curve. This dedication to lifelong learning is reflected in their active pursuit of certifications, research endeavours, and continuous upskilling initiatives.

Gearing Up with Certifications: Faculty members are constantly expanding their skill sets through industry-recognized certifications. These programs delve into the latest AI and ML tools, frameworks, and methodologies. This not only equips them with the knowledge to integrate cutting-edge practices into their teaching but also allows them to guide students towards the most in-demand skill sets in the AI and ML job market.

Pushing the Boundaries: A Culture of Research The department fosters a vibrant research environment where faculty members actively engage in groundbreaking research projects. This not only contributes to the advancement of the field but also inspires students to pursue their research interests. Collaborative research efforts with peers and industry partners further enrich the department's research landscape, leading to impactful publications and presentations at prestigious conferences.

Upskilling for Excellence: The faculty's commitment to lifelong learning extends beyond certifications and research. They actively participate in workshops, online courses, and conferences, constantly seeking opportunities to expand their knowledge and refine their teaching skills. This dedication to upskilling ensures that students receive instruction from faculty members who are not only experts in their fields but also passionate about staying current with the ever-evolving landscape of AI and ML.

A Benefit for All: The faculty's commitment to lifelong learning has a positive impact on the entire department.

Enhanced Learning Experience: Students benefit from exposure to the latest advancements and teaching methods, ensuring they graduate with the most relevant and sought-after skills in the AI and ML industry. Cutting-Edge Curriculum: Faculty members can integrate their newly acquired knowledge into the curriculum, offering students a dynamic and up-to-date learning experience. A Culture of Innovation: The department fosters a culture of continuous learning and exploration, inspiring students to become lifelong learners themselves.

Leading by Example: Sreyas Institute's CSE(AI&ML) department sets a remarkable example by prioritizing faculty development. This dedication to lifelong learning ensures a future-ready department equipped to empower students to become the next generation of AI and ML leaders.

SHARPENING THE SWORD: CSE(AI&ML) FACULTY INVESTS IN GROWTH

FACULTY NAME	UNIVERSITY NAME	PHD AWARDED/ REGISTERED
DR. A SWATHI	LOVELY PROFESSIONAL UNIVERSITY	IMAGE PROCESSING AND DEEP LEARNING (FEB 2023)
A. SWAPNA	SR UNIVERSITY	CLOUD & EDGE COMPUTING
CH. NAGENDRA SAI	SR UNIVERSITY	MACHINE LEARNING
G. RAMYA	SR UNIVERSITY	MACHINE LEARNING
DR. MADAN MOHAN	JNTUH	DEEP LEARNING (JAN 2024)
S. KUSUMA	BHARATIYA ENGINEERING, SCIENCE AND TECHNOLOGY	ARTIFICIAL INTELLIGENCE

SCHOLARLY CONTRIBUTIONS OF SREYAS CSE(AI&ML) FACULTY

Sreyas Institute of Engineering and Technology has been at the forefront of technological advancements, and its CSE(AI&ML) department is no exception. The faculty members, renowned for their expertise and dedication, have made significant contributions to the field through their research, publications, and academic endeavours. Let's delve into some of their notable works. Notable Publications and Research Areas.

The CSE(AI&ML) faculty at Sreyas has published extensively in prestigious international journals and conferences. Their research spans a wide range of topics, including Machine Learning Algorithms: The faculty has developed innovative machine learning algorithms for various applications, such as image recognition, and predictive analytics. Deep Learning Models: Their research on deep learning architectures has led to breakthroughs in areas like computer vision, speech recognition, and generative models. AI Ethics and Societal Impact: The faculty is actively engaged in exploring the ethical implications of AI and its impact on society, focusing on issues like bias, fairness, and privacy.

Healthcare Applications of AI: Their research has contributed to the development of AI-powered solutions for medical diagnosis, drug discovery, and personalized healthcare. I**ndustry 4.0 and IoT:** The faculty is at the forefront of research on AI-driven technologies for Industry 4.0, including IoT, smart manufacturing, and predictive maintenance. Recent Publications and Achievements

Journal Publications: Several faculty members have published research papers in top-tier journals such as IEEE Transactions on Neural Networks and Learning Systems, ACM Transactions on Computing Systems, and the Journal of Artificial Intelligence Research.

Conference Presentations: The faculty have presented their research findings at prestigious international conferences like NeurIPS, ICML, CVPR, and ICLR.

Grants and Awards: The faculty has secured research grants from government agencies and private foundations to support their research projects. They have also been recognized with awards and honors for their contributions to the field.

PUBLICATIONS OF S.PRUDHVI RAJ

FLIGHT DELAY PREDICTION BASED ON AVIATION BIG DATA AND MACHINE LEARNING

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH IN ENGINEERING AND MANAGEMENT

This research explores flight delay prediction using aviation big data combined with machine learning techniques. It integrates data from Automatic Dependent Surveillance-Broadcast (ADS-B) systems, weather conditions, and airport traffic flow to build comprehensive datasets. Two machine learning models—Random Forest and Long Short-Term Memory (LSTM)—are employed, achieving an accuracy of 90.2% for binary classification tasks. While the Random Forest model excels in overcoming overfitting and delivering reliable results, the LSTM model demonstrates the potential for handling time-sequential data but suffers from overfitting in limited datasets. The system is scalable and adaptable, with real-time predictive capabilities to improve airline operations and passenger experience. Future work focuses on expanding datasets and refining network architectures to further enhance prediction accuracy and address challenges in multi-class classification tasks.

BRAIN TUMOR DETECTION

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH IN ENGINEERING AND MANAGEMENT

This paper explores a deep learning-based solution for identifying brain tumours in MRI scans. The proposed system employs a Convolutional Neural Network (CNN) architecture to achieve a minimum accuracy of 97% and a maximum of 100% in classifying tumour and non-tumor images. Using a labelled dataset sourced from Kaggle, the CNN model processes MRI images through layers of convolution, pooling, and dense neural networks to discern patterns indicative of brain tumours. The model's deployment is supported by a user-friendly interface, built with the Streamlit library, ensuring accessibility. The research highlights the potential of integrating advanced machine learning techniques into medical diagnostics, aiming to enhance accuracy, reduce human error, and improve patient outcomes.

CRYPTOCURRENCY PRICE FORECASTER

QUEST JOURNAL

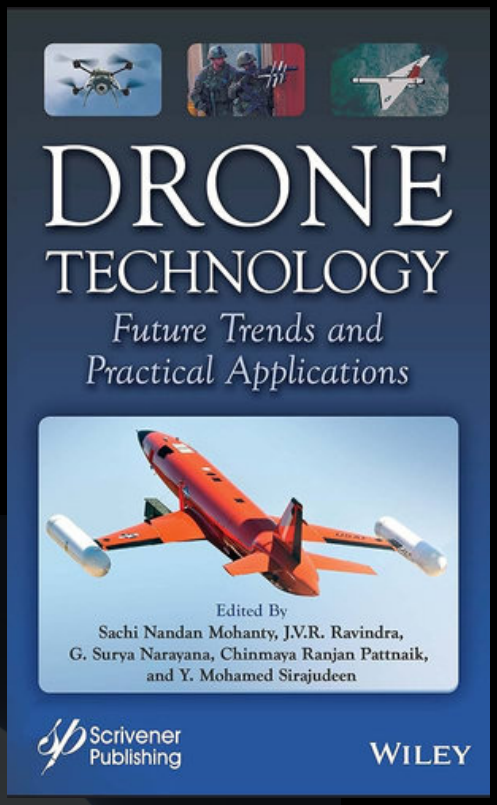
This research introduces a machine learning model using K-Nearest Neighbors (KNN) regression to predict cryptocurrency prices, achieving 97% accuracy. The system analyzes historical data to forecast prices for cryptocurrencies like Bitcoin and Ethereum, aiding investors in making informed decisions. Integrated with a user-friendly web application, it provides interactive features such as time-series graphs and multi-currency price predictions, showcasing the potential of machine learning in financial decision-making.

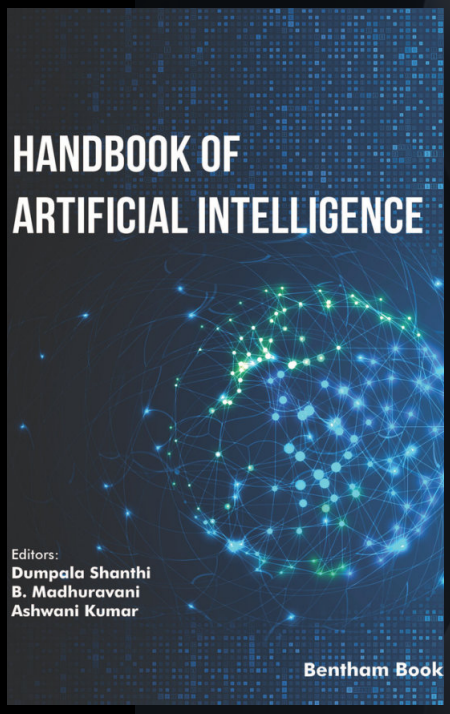
PUBLICATIONS OF DR. A SWATHI

APPLICATION OF DRONES - REVIEW

(WILEY ONLINE LIBRARY) - SCOPUS INDEXED

Reducing costs and expenditures while improving the efficiency of technological solutions is essential for large-scale industries. Industries such as mining, ports, gas, and large plants involve processes and applications where human power may be at risk or impossible to use. Areas of inspection may include infrastructure maintenance, leak detection, equipment monitoring, security surveillance, and quick hazard monitoring. In such areas, one can rely upon drone technology to assist in better visibility, investigation, and quick alerting of failures in various systems. Hence, large-scale industries are quite interested in investing in drones to maintain systems and infrastructure for efficiency and productivity. In this chapter, we identified various types of drones and drone technologies to help readers better understand the technology. Furthermore, note that challenges to drones or unmanned aerial vehicles (UAVs), especially obstacle detection, battery life, and attackers, need to be overcome for them to fly or operate effectively. Here, we discussed UAV categorization, automation systems, and future areas of interest in business and research. Various control techniques for their construction process, manufacture, and analysis are also explored in depth. Moreover, obstacles to UAV function or operations are highlighted and examined, including fast charging, emergency braking, and security.





REAL-TIME OBJECT DETECTION AND LOCALIZATION FOR AUTONOMOUS DRIVING

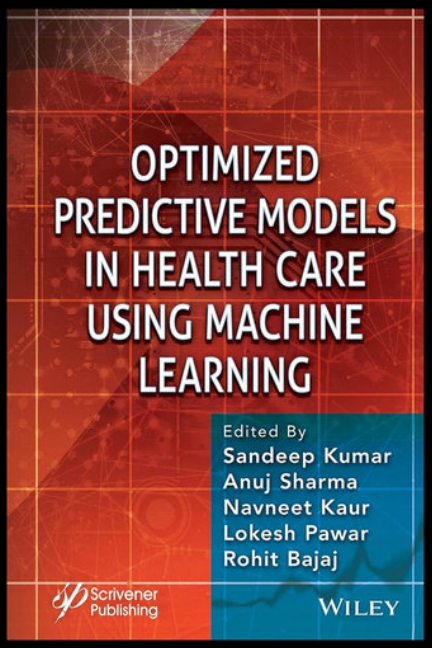
(BENTHAM SCIENCE) - SCOPUS INDEXED

The term “object detection” refers to a technology that enables humans to recognise specific types of things present in visual media. One of the important applications of the technique is autonomous driving cars. In the application, the activity is to detect the various objects present in the single image frame. Examples of objects belonging to multiple classes are trucks, bikes, persons, cars, dogs, and cats. For this task, we use object localization and classification as we have to locate multiple objects in the image. Various techniques available in the market based on Deep Learning use inbuilt architectures such as VGG-16 and InceptionV3. Using these techniques to solve the problem is a reasonable solution but the response time from these architectures may not be feasible as the autonomous vehicles have to react in less than 0.02 milliseconds in order to avoid collisions of all sorts. So using YOLO, we simply predict the classes and the bounded co-ordinates of the object in a single run of the model and detect multiple objects from the image rather than focusing only on the interested regions of the image as formerly employed by various models. YOLO is fast and accurate with the help of Convolution Neural Networks and is less likely to produce localization errors.

WEARABLE GAIT AUTHENTICATION : A FRAMEWORK FOR SECURE USER IDENTIFICATION IN HEALTHCARE

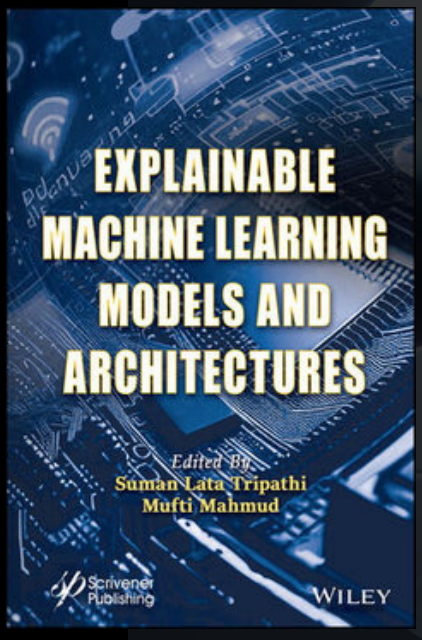
(WILEY ONLINE LIBRARY) - SCOPUS INDEXED

With the wide use of wearable Internet of Things (IoT) devices, it is now possible to quickly gather information on human activities, including unconscious or subconscious acts. One such behavior is walking, which can provide individual patterns for each person and be utilized as a biometric feature for user authentication in healthcare systems. This paper proposes the lightweight seamless authentication framework (LiSA-G), which may be used to identify and authenticate users on commercial smart watches by leveraging statistical data and sensor data features related to human behavior. With a mean equal error rate (EER) of 8.2% and fewer features and less sensor data, the study's findings demonstrate that this approach delivers higher authentication accuracy. Such a strategy is also more realistic and can be deployed quickly due to the limited computational and energy capacity of wearable IoT systems in healthcare setting.



ARTIFICIAL INTELLIGENCE-BASED ACTIVE VIRTUAL VOICE ASSISTANT

(WILEY ONLINE LIBRARY) - SCOPUS INDEXED



As we all know, there are many voice assistants which determine the user's intent which can be identified by the user input in spoken or textual form. Unlike the other voice assistants, here we can open multiple tabs or apps concurrently. Though the input is taken, the voice assistant will be activated till the user says to exit the app. It is a very useful tool for reminders, searching, opening, and saving applications as the user needs. The proposed virtual-based voice assistant helps people to communicate with the computer, which indeed saves time. The processes which are to be implemented will work under AI modules like speech recognition, pyttsx3, and operating system. This new version has added three features. They are movie recommender, book recommender, and some Covid protection features. The movie recommender and the book recommender work on the users' interests. For example, the movie recommender helps users to find the best movie according to their interest in different genres and displays it based on the IMDB ratings and the number of users watching. This also includes series recommenders too, like web series. The same process is applied to book recommender. The books are displayed according to user interests based on author and genres (romcoms, thrillers, etc.). Because of the rapid spread of Covid-19, precautions should be taken man-datorily. All the Covid symptoms are stored in our database, through which users can receive information and advice based on their symptoms. All these processes work under AI modules like speech recognition, pyttsx3, and operation system.

MEMORIES

Looking back, those were the days we're not just selling panipuris-creating beautiful memories ,bonding with friends and bringing smiles to their faces It reminded us how little moments of joy can make life beautiful.

We thought selling mojitos at college fest would be a breeze-until we spent half the day squeezing limes and arguing over the "perfect" mint ratio. By the end, we were out of ice, out of breath, and somehow had a line of customers demanding refills. We didn't sell out - we learned the teamwork.

Signature Day

IT'S A BITTERSWEET MOMENT, FILLED WITH LAUGHTER, NOSTALGIA, AND A HINT OF SADNESS. AS WE WRITE LITTLE MESSAGES, DRAW SILLY DOODLES, AND EXCHANGE HUGS, WE CAN'T HELP BUT THINK ABOUT HOW FAR WE'VE COME AND HOW MUCH WE'VE GROWN. THIS COLLEGE THAT ONCE SYMBOLIZED RULES AND ROUTINE NOW FEELS LIKE A CANVAS OF MEMORIES AND EMOTIONS.

FAREWELL

FRESHERS

To all those stories and smiles, finding the purpose in each piece we have left within us.

Cool!

Capturing the Memories, Embracing the Future!

PROUD GRADUATE MOMENT

INDUSTRY VISIT

STUDENTS VISITED NALSOFT COMPANY AS PART OF AN INDUSTRY TOUR, GAINING PRACTICAL EXPOSURE TO ENTERPRISE SOFTWARE SOLUTIONS AND LEARNING ABOUT THEIR IMPLEMENTATION IN BUSINESS PROCESSES.

INTRODUCING THE AI CLUB: A NEW ERA OF INNOVATION IN AIML

A Hub for Learning and Growth

The AIML Department is proud to announce the launch of its new AI Club, a student-led initiative designed to foster innovation, collaboration, and hands-on experience in the world of Artificial Intelligence and Machine Learning. The club aims to bring together passionate individuals from all disciplines to explore the vast potential of AI, through workshops, projects, competitions, and research opportunities.

AI for Social Impact

As the field of AI continues to shape the future of technology, the AI Club will provide a platform for students to stay at the forefront of these advancements. Whether you're an AI enthusiast or just beginning your journey, the club is designed to cater to all levels of interest and expertise. Members will have access to valuable resources, networking opportunities, and mentorship from faculty and industry professionals.

Hands-on Projects and Competitions

In addition to technical growth, the AI Club will focus on creating a vibrant community of learners. Regular meetups, guest lectures, and hands-on projects will allow students to exchange ideas and collaborate on real-world challenges. From developing AI-driven solutions to participating in hackathons and global competitions, the AI Club will be the launchpad for your next big idea.

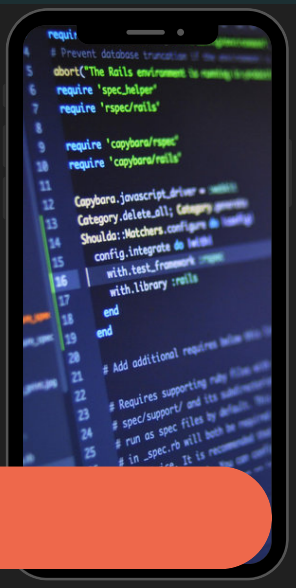
Get Involved!

Join us as we embark on this exciting adventure of discovery and growth. Stay tuned for upcoming events, workshops, and opportunities to get involved. Together, let's shape the future of AI, one innovation at a time!

THE ROAD AHEAD

Hackathon

Participate in Coding competitions and win prizes

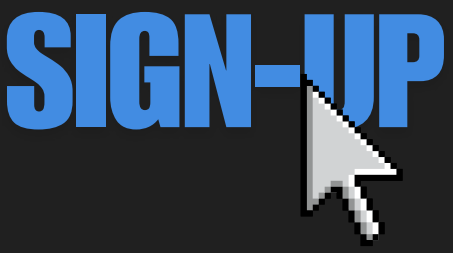


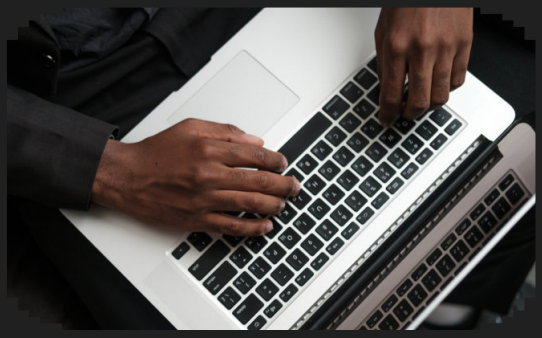
Codeathon

Solve coding questions with your team, or individual and improve your skills

Cultural Events

Showcase your talents like singing, drawing in special events for talent





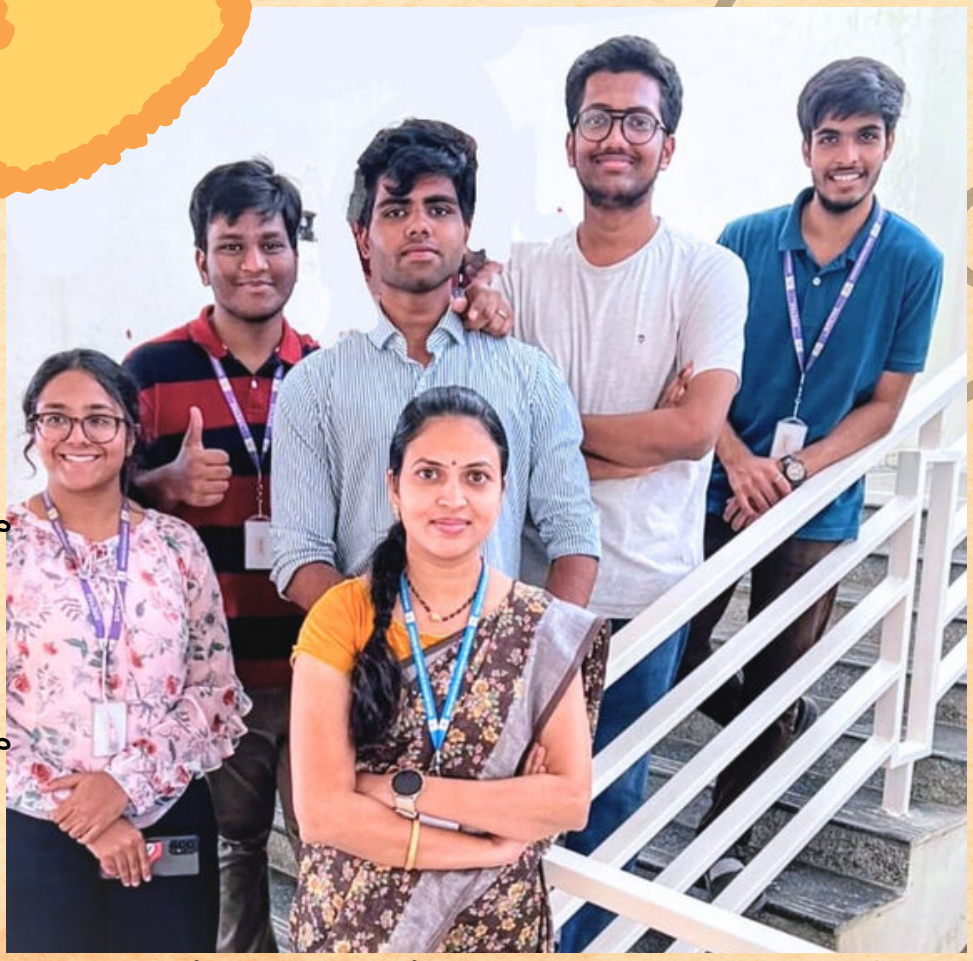
Workshops

Attend workshops with industry experts and stay up-to-date with the tech.

Industrial Visit

Attend college organized field trips to work sites, and learn how your studies affect the real world.

Editorial Team



Dear Readers,

Welcome to this edition of our AI/ML Department Magazine! Creating this magazine has been an incredible journey filled with hard work, creativity, and moments of pure joy. From brainstorming to final touches, every step has been a mix of challenges, fun, and teamwork. This magazine reflects our passion for AI and ML and showcases the spirit of innovation in our department. We hope it inspires and excites you as much as it did us while making it.

Happy reading!
Warm regards,
Editorial Team

Editorial Team

"It's not every day you come across people who make everything around them just a bit more captivating"

Syed Rudaar
22VE1A66C3

MVP !!

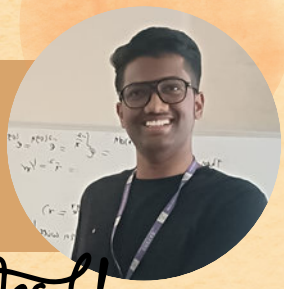
Aishwarya Nalla
22VE1A66A5

"The pages of life are written with resilience, passion, and purpose-let yours inspire the world"

MANIFEST

"The future belongs to those who believe in the beauty of their dreams"

Lokeshwar Reddy
23VE1A6686



Grateful!

Vishnu Sai
23VE1A66C9

"The most admirable flaw of humanity - Hope"

Fearless

"Shine bright, but remember, shadows grow with the light."

Esvin Joshua
23VE1A6673

Dream Big

CSE(AI&ML) Department: Where Code Meets the Future

This Season's Highlights:

Empowering Innovation: Dive into the captivating recap of our workshops with the IEEE Sreyas Student Branch, where you unlocked the secrets of AI & ML.

Celebrating Excellence: Witness the remarkable achievements of our students and department, from hackathon triumphs to groundbreaking research.

A Season of Inspiration: Relive the unforgettable moments of the semester, a journey filled with learning, collaboration, and pushing the boundaries of AI.

Stay Connected, Stay Inspired

Follow us on social media for the latest news and updates https://sreyas.ac.in/aiml/ Join our vibrant community and connect with fellow AI enthusiasts

The future of AI is being built here. Are you ready to be a part of it?

Contact us:

https://sreyas.ac.in/aiml/

SCAN ME