



PANIMALAR ENGINEERING COLLEGE

An Autonomous Institution - (JAISAKTHI EDUCATIONAL TRUST)

Affiliated to Anna University, Chennai
Approved by AICTE, UGC FOR 2(f) & 12(B) STATUS
ACCREDITED BY NATIONAL BOARD OF ACCREDITATION(NBA)

CAMPUS CONNECTOR



2024 - 2025

DEPARTMENT OF ARTIFICIAL INTELLIGENCE & DATA SCIENCE



IEEE



IEEE COMPUTER SOCIETY



INSTITUTION'S INNOVATION COUNCIL
(Ministry of Education Initiative)

ABOUT

The department of artificial intelligence and data science showcases its commitment to excellence through faculty upskilling, student achievements, impactful research, industry collaborations, and outreach initiatives aligned with emerging technologies and global sustainable development goals.

SUSTAINABLE DEVELOPMENT GOALS





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News and Views Around



DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Volume 2

Issue 1

October 2024

EDITOR'S NOTE

Dear Readers,

We are pleased to present this newsletter on behalf of the Department of Artificial Intelligence and Data Science, Panimalar Engineering College. It highlights the semester's key events and the notable achievements of our students and faculty. We express our sincere gratitude to Dr. S. Malathi, Head of the Department, for her constant support and guidance.

INSTITUTE VISION

To transform the budding engineers into academically excellent, highly intellectual and self-disciplined engineering graduates to mould them as good citizens with the spirit of integrity and morality that would cater to the needs of our nation.

INSTITUTE MISSION

- To impart quality education with high standards of excellence in engineering and technology.
- To provide an excellent infrastructure in a serene and conducive atmosphere that would motivate the students in their pursuit of knowledge in the field of engineering and technology.

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DEPARTMENT VISION

To produce high quality creators and ethical engineers for innovative technology in the field of Artificial Intelligence and Data Science.

DEPARTMENT MISSION

- M1:** To develop the department as a center of Artificial Intelligence for significant breakthroughs in advancing the promise of human-machine systems that can address complex cognitive tasks.
- M2:** To impart quality and value-based education and contribute towards the innovation of computing Data Science for the translation of data into information to support and improve decision making.
- M3:** To produce ethical engineers and researchers by inculcate the values of humanity and courage in producing relevant solutions to address business and societal challenges.

PROGRAMME EDUCATIONAL OBJECTIVES(PEOs)

PEO 1: Mastering AI and Data Science for Human Machine Synergy

To enrich knowledge to the engineering students with cutting-edge technologies like Artificial Intelligence and Data science and enable them to develop innovative solutions to solve complex problems in various sectors and to enhance the synergy between humans and intelligent systems for optimal performance.

PEO 2: Fostering Interdisciplinary Research Innovation and Ethics

To engage the students in advanced research with special focus on AI and cultivate a deep knowledge of ethical frameworks that will contribute to the development of fair and accountable systems that prioritize societal well-being.

PEO 3: Pathways to Professional Excellence

To enable the students to secure successful careers through strong technical expertise and skill sets and drive them to pursue lifelong learning with integrity-driven mindset and become successful entrepreneurs.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO 1 : AI Driven Innovation

Graduates should be able to evolve AI based efficient domain specific processes for effective decision making in several domains such as business and governance domains.

PSO 2 : Data-Driven Decision Making Insight

Graduates should be able to arrive at actionable fore sight, insight, hind sight from data for solving business and engineering problems.

PSO 3 : Societal Intelligence Solutions

Graduates should be able to create, select and apply the theoretical knowledge of AI and Data Analytics along with practical industrial tools and techniques to manage and solve wicked societal problems.

Programme Outcomes (POs)**PO1: Engineering knowledge:**

Apply the knowledge of Mathematics, Science, Engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis:

Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/development of solutions:

Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO 4: Conduct investigations of complex problems:

Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO 5: Modern tool usage:

Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO 6: The engineer and society:

Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO 7: Environment and sustainability:

Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO 8: Ethics:

Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO 9: Individual and team work:

Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO 10: Communication:

Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Project management and finance:

Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Life-long learning:

Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change

EDITORIAL BOARD**Chief Editor:****Dr. S. MALATHI****Faculty Editor:****Mrs.S. SRINIDHI****Student Representatives:****P. Dinesh III AI&DS-C, V. Manikandan III AI&DS-C**

Department Activities



An ERP contest was organized for students to present their projects. They also engaged in an interactive session with experts to gain insights into pursuing higher education.



Knowledge Engineering & Intelligent Systems laboratory was officially launched to enable the students to solve the problems practically and apply statistical analysis.



The department hosted a workshop on Generative AI, providing hands-on training on the latest achievements for both faculty and students.



Students participated in an interactive session with experts about pursuing higher education, engaging in discussions to gain valuable insights and guidance.



Maverick Nest is acknowledged for its innovative methods in multiple sectors, particularly in technology, education, and consulting. AI & DS department has entered into a memorandum of understanding with this company.



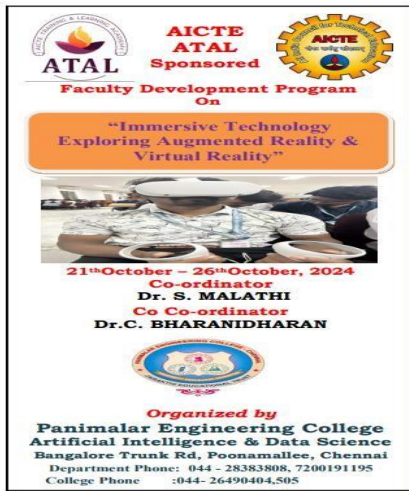
The AI & DS department has signed a memorandum of understanding (MOU) with MIT Square London to enhance collaboration and promote innovative projects in artificial intelligence and data science.

Upcoming Events:

- ATAL FDP to be conducted from October 21, 2024
- IEEE Xtreme 18.0 is scheduled for October 26, 2024.
- A TechDivathon exclusively for girls is scheduled to take place in January-2025.
- The department plans to organize the PECTEAM International Conference in March 2025.

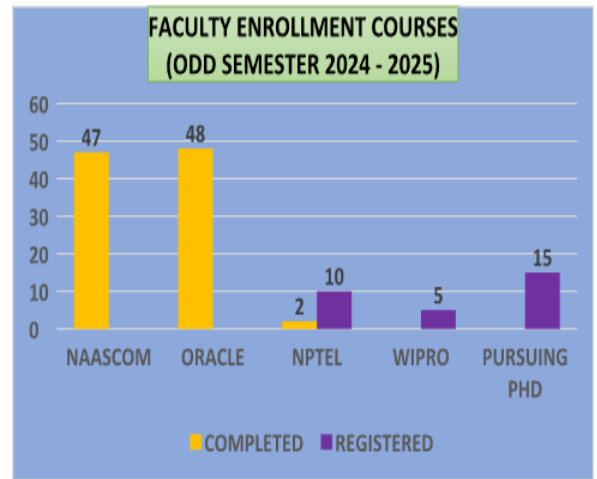
Project Proposal:

Our R&D team has submitted a project proposal to the Government's National Initiative programs, including Make in India, Digital India, and Innovate India, under the "Fund for Improvement of S&T Infrastructure (FIST)" scheme.



The department has proposed to hold an ATAL FDP on “Immersive Technology: Exploring Augmented Reality & Virtual Reality” from October 21 to October 26, 2024. This program aims to enhance participants' understanding of cutting-edge technologies and their applications in various fields. Participants will gain an understanding of Unity Tools and its operations in Meta Quest.

FACULTY ACADEMIC ACTIVITIES:

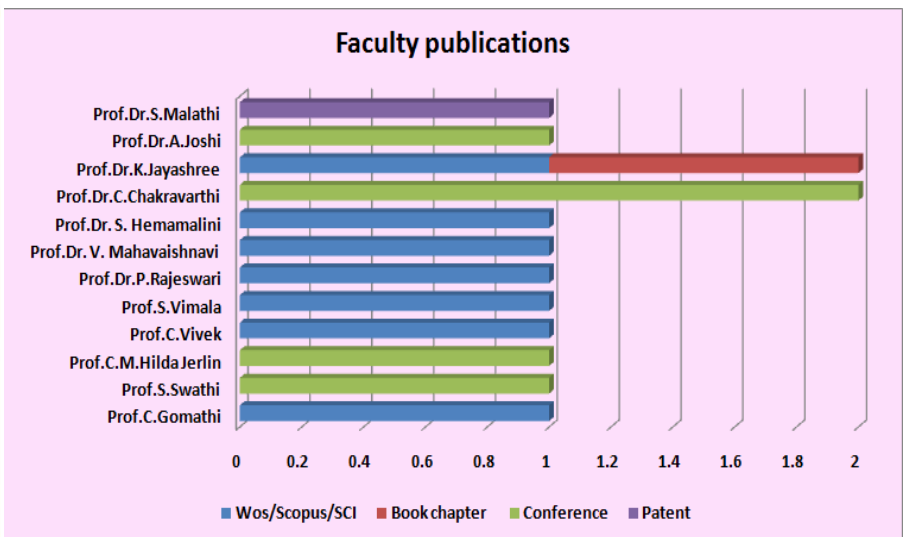


Academic Outreach

Faculty Publications



Prof. Dr. S. Malathi has been granted a patent for her work titled "MPK Elite Humanoid Robot for Intelligence Hostage."



Our faculty members have published numerous papers in conferences, journals, and book chapters, significantly contributing to the field of research and publication.

Faculty Interaction



A panel discussion featuring experts from various fields on global education among students took place, with Prof. Dr. S. Malathi, Head of the Department was invited as one of the chief guests to honor deans and professors from different universities. The annual magazine was also released during the event, which aimed to encourage the dialogue and collaboration among educational leaders while celebrating the achievements of the academic community.



Prof. Dr. W. Gracy Theresa has received the Certificate of Innovation for her outstanding contributions to research, innovation, and intellectual property. She also won the Best Presentation award during the Faculty Abroad Program at Shinawatra University in Thailand.

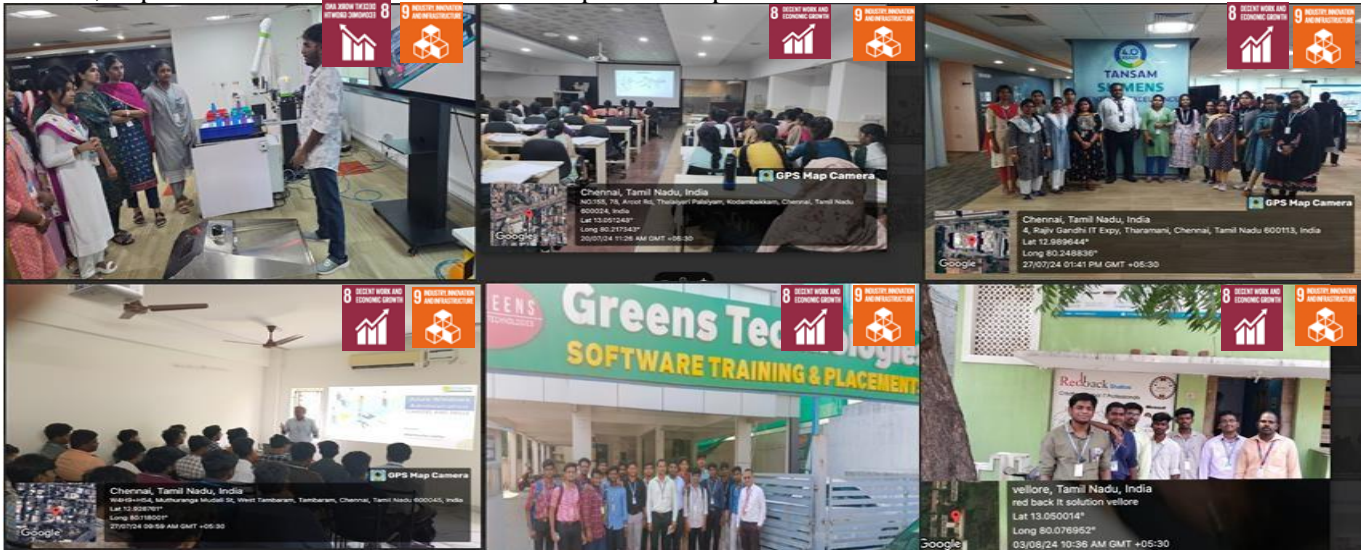


Prof. Dr. S. Chakravarthi Received Sci – Edu Awards 2024 in the field of education in Artificial Intelligence and Data Science by ARPR Events & Kalvimalar Newspaper.

Learning Experiences

Industrial Visit

The department arranged industrial visit to various companies, including **AI Cloud Solutions in Vadapalani**, **TANSAM at Tidel Park**, **Greens Technologies in Thoraipakkam**, and **Redback Studios in Vellore**, as part of its initiatives for career development and placement.



Field Visit

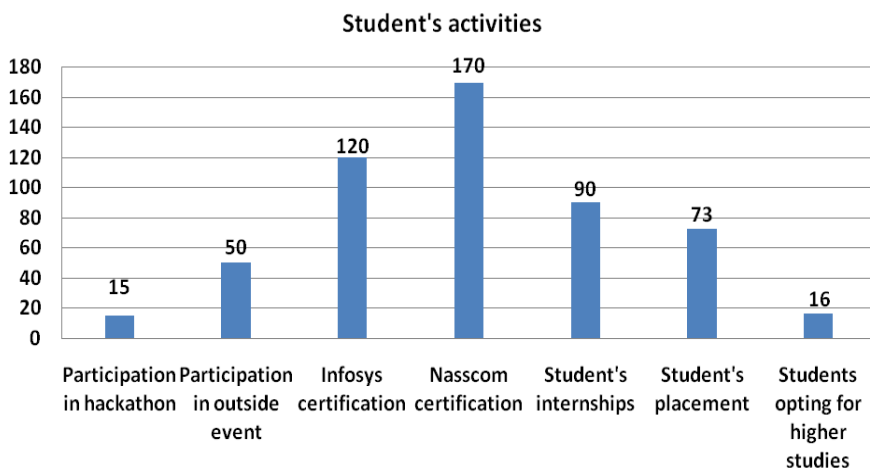


The three-day field trip to Chenji, sponsored by Panimalar Engineering College, aimed to collect real-time data for the Augmented Reality project "**AR Travenverse**," which focuses on the Chenji temple. Participants explored significant sites like the Venkata Ramana Temple and Raja Fort, gaining valuable historical insights through in-depth observations and discussions with locals. This experience not only enhanced their appreciation for cultural heritage but also strengthened bonds among participants, enriching their collaborative spirit and teamwork skills.

Upcoming visit:

A total of 43 students from the 2022-2026 batch will participate in a Cybersecurity certification course at Cybertorium in Kuala Lumpur, Malaysia, scheduled for October 14 to October 18, 2024.

Student activities



Our students have engaged in a variety of events, including paper presentations, hackathons, symposiums, certification courses, and internships, both within and beyond the college. Many students have secured placements in reputable organizations. Additionally, these experiences have helped them develop essential skills and build professional networks, further enhancing their career prospects.

Abdul Kalam Azad A, Abinesh B S, Aswin C, Jeffrey Steve Paul S, and Khalid Ahamed M from IV Year AI&DS completed an ERP-based project that has been nominated to compete in the final round.

Student's Placement:

Tech
Mahindra



Companies Placed



Career-oriented achiever



We extend our heartfelt congratulations to Selvalingeshwaran.R from the 2020-24 batch for securing a position as a Systems Engineer at Tata Consultancy Services, with an impressive annual package of 9 LPA. This achievement is a testament to his hard work and dedication.

Student's on-going projects:

- *Third-year students S.M. Sakthi, T.M. Ranjitha, and Y. Reena Sharon are developing a chatbot based project.*
- *Third-year students Farman Batcha M, Hariharan M.S., and Dharshan Roy K are creating an Autonomous Supermarket Manager and plan to apply for SEED.*
- *Second-year students Taniksha G and Tanvi R are working on "Automated Terrain Adjustment: Enhancing Resilience with Smart Water Control."*
- *Second-year student Vidyashree M is developing "Road Safety with Smart Signal Technology."*
- *Third-year students Mogan S, Kishore Kumar R, Mathesh S, Avinash S, and Dheekshith S are creating "Autonomous Drone to Track Human Beings in Natural Disasters" for YUKTHI.*
- *Third-year students A.Reshik Rabacca, Vaishali S, Harini S, Sahana S, Priyadarshini N R S are doing a project titled "Travenaverse" based on the technology of Virtual Reality creating an immersive travel experience.*

Academic Achievements

II Yr/ IV Sem

Sl. No.	REGISTER NUMBER	NAME	GPA	RANK
1	211422243268	REVATHI R	9.458	I
2	211422243123	JENNATHUL ZULFIYA B	9.375	II
3	211422243269	RITHIKA SRI Y	9.292	III
4	211422243349	VARSHA R	9.292	

III Yr/ VI Sem

Sl. No.	REGISTER NUMBER	NAME	GPA	RANK
1	211421243033	DEVESHWARAN SRIDHARAN	9.870	I
2	211421243044	DINESH P	9.609	II
3	211421243139	ROHINI SANGEETHA M	9.609	III

Internship details:

- *Prithika B.L of III Yr AI&DS has completed her one month internship in Combat Vehicle Research & Development Establishment [CVRDE] a Central Govt. Organization.*
- *ISRO (Indian Space Research Organisation) provides opportunities for students and researchers interested in space science and technology. Reena Sharon.Y, Gopikashree P R and Devadarshini M of III Yr AI&DS have applied for internship at Vikram Sarabhai Space Centre (VSSC), which offers an exciting opportunity for college students. through its internship program.*

Recognition Gallery

P Muthupandi of III Year has won the Gold Medal in the 110m Hurdles and the Silver Medal in the Long Jump event in the prestigious Chief Minister's Trophy. As an accomplished athlete, he has consistently excelled in various sports and has also secured top positions in multiple national-level competitions. His dedication, discipline, and passion for athletics continue to set a benchmark of excellence and inspire his peers.



Santhosh A. and Santhosh K.K. of III Yr. secured First Place in the Quantum Quest event at the National Level Technical Symposium "Flair 2k24" held at Loyola Engineering College.



V. Yeshwanth, a second-year student, received the "Young Entrepreneur" award for his startup "Sky Scholar" at the Tamil Nadu Achievers Award 2024. The award was presented by actors Nalini and Pandiyarajan.

Kishore Kumar B of II Year participated in the "International Karate Championship 2024" and emerged victorious by securing first place, earning the prestigious gold medal in the senior category (75 kg). His exceptional skill and determination were evident throughout the competition, setting a high standard for his peers. This remarkable achievement highlights his dedication to the sport and his ability to excel on the global stage.



Thaniksha G and Tanvi R has secured Second Place in "Presentix" conducted in Sri Sai Ram Institute of Technology, Chennai



Safana Yasmin S and Ramya S from the II Year achieved First Prize in the "FUSE IT" competition held at S.A. Engineering College, showcasing their exceptional skills and teamwork.



Thaniksha G and Tanvi R secured First Prize in "PROJECT EXPO '24" held at S.A. Engineering College



M Kumaran of III yr received the appreciation award for being as the joint secretary and conducting various events in Maths Club.



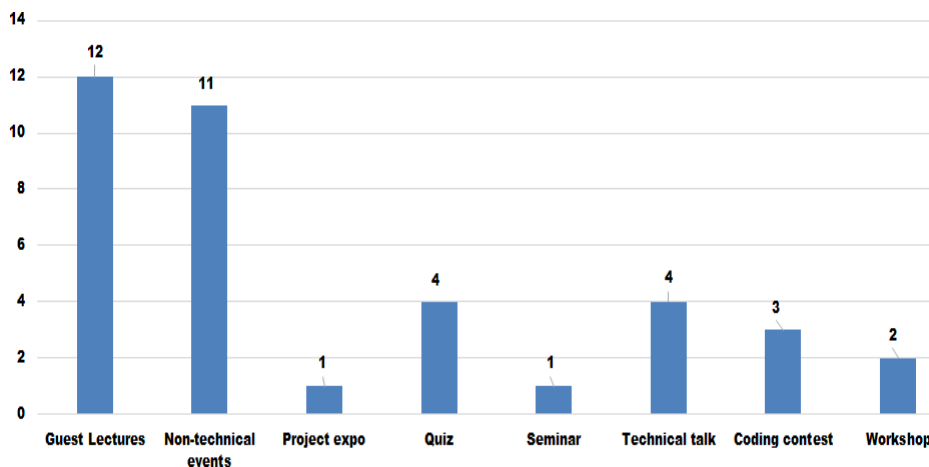
Vidhya Shree M, a second-year student, has been awarded the "BEST INNOVATION" accolade at "PEC TECHATHON 2.0" held at Panimalar Engineering College, Chennai, for her exceptional contributions. Additionally, she has secured prizes and cash awards in nearly eight events, both on and off campus. Our department extends its heartfelt congratulations to her on this outstanding accomplishment.

Dharshini M, Divya Lakshmi S, and Eliza Adeline S secured the Second Runner-Up position in “PEC TECHATHON 2.0” held at Panimalar Engineering College, Chennai. Their impressive teamwork and innovative solutions were highly appreciated by the judges. This achievement reflects their strong technical prowess and dedication to excellence in the field.



Kingsly A, Gokul Krishnan G, Abishek S, and S. Dilip Kumar secured the “MOST INNOVATIVE SOLUTION” award in “PEC TECHATHON 2.0” held at Panimalar Engineering College, Chennai. Their project stood out for its creative approach and practical impact, receiving high praise from the panel. This accolade underscores their exceptional problem-solving abilities and commitment to developing groundbreaking solutions.

Events Conducted



A variety of events, including workshops, guest lectures, non-technical activities, and seminars, were organized for the benefit of the students. These initiatives aimed to enhance their technical and soft skills while providing valuable industry insights. The events also created opportunities for students to engage with experts, broaden their knowledge, and gain exposure to real-world applications.

IEEE Events

Several seminars were organized in association with IEEE Computer Society and IEEE Student Branch. Students who are IEEE members and non-IEEE members of all the societies attended the seminar. The 15th Anniversary of IEEE was celebrated as IEEE day by the IEEE Student Branch of Panimalar Engineering College with the title Spectra-2k24 on 08-10-2024 at the PEC auditorium.

IEEE AWARDS:

- Our department received the **IEEE SOCIETY STRONGHOLD** FOR HAVING MORE NUMBER OF STUDENT AND PROFESSIONAL MEMBERS.
- **Pillars of Insights Best Supporting Staff Award:** Prof. Dr. S. Hemamalini
- **IEEE Xtreme Top Performers:** Dinesh Kumar S, Adi Kesava Reddy K, and Praneth Kumar Reddy from the IV Year
- **Spotlight Commander [Best Coordinator Among Students]:** Challapalli Manikantaa, Manigandaa C. S., Mohamed Arshad M., Akash S., Yogeshwaran H., and Jennathul Zulfiya B. from the III and IV Years
- **Crown Jewel of Excellence [Best Student Award]:** Gokul Krishnan G., Abishek S., Dilip Kumar S., Vidhya Shree M., Thaniksha G., and Tanvi R. from the III and II Years



IEEE SPECTRA-2K24

Club activities

Data Science Club activities:



The Data Science Club conducted an inspiring session on “Unlocking Creativity with Generative AI,” accompanied by a Project Expo that highlighted innovative use cases of Generative AI. The event allowed participants to delve into the creative potential of AI, promoting the development of unique solutions

AI Club activities:



Dr. R. Annamalai, Associate Professor from Amrita School of Computing, Chennai, conducted a guest lecture on problem-solving skills using Java through the LeetCode platform in 2024. The session focused on equipping participants with essential coding techniques and strategies for tackling algorithmic challenges. It provided valuable insights into effective problem-solving methods for competitive coding scenarios.

AR/VR Club activities:

Workshop on Exploring XR (Extended Reality) Technology by Dr. C. Bharanidharan, Associate Professor, AI/DS, 2024. The AR/VR club is vital for deepening members' understanding of extended reality technologies. It offers hands-on learning experiences and insights into real-world applications, promoting collaboration and innovation within the group.



"Thank you for staying updated with us! We hope you found this edition insightful. Stay tuned for more updates and exciting news in our forth-coming editions." - Prof.S.Srinidhi, Prof. P.Misba Marybai