



# 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



2022 - 2023

### 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.



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## DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Issue 1

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### EDITOR'S NOTE

Dear Readers,

We are excited to present this edition of the newsletter from the Department of Artificial Intelligence and Data Science, Panimalar Engineering College, highlighting the semester's key milestones and achievements of our students and faculty. We sincerely thank Dr. S. Malathi, Head of the Department, for her continuous 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)****P01: Engineering knowledge:**

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

**P02: 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.

**P03: 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.

**P0 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.

**P0 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.

**P0 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.

**P0 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.

**P0 8: Ethics:**

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

**P0 9: Individual and team work:**

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

**P0 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.

**P011: 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.

**P012: 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:****Prof. S. VIMALA****Student Representative:****ASIYA MARIYAM AMEENUDEEN II Yr. - A**

## Department Milestones



The student intake was significantly increased to 360, reflecting the growing demand and expansion of the department.



Initiated a Metaverse certification initiative in partnership with Munjal Birmingham City University, UK.

The Deep Learning Lab was set up with an i9 processor and NVIDIA 4070 Ti GPU to support advanced AI research and training.



The AICTE-approved IDEA Lab was established to promote innovation, product development, and hands-on learning among students.



Our department received approval to function as a Pearson-recognized and Unity Global Certification Nodal Test Centre to provide global certification opportunities to students.



Established a well-equipped Robotics Lab to enhance hands-on learning, innovation, and practical exposure for students.

## Professional Society Activities

### “National Workshop on Photoshop”

Panimalar Engineering College, Department of Artificial Intelligence & Data Science in association with IEEE Madras Section, IEEE Computer Society and IEEE Student Branch has conducted IEEE National Workshop on Photoshop, Web development and APP development from 01.09.2022 to 05.09.2022. The resource persons were Mr. Balaji (Vice-President), Mr. Dinesh Kumar (Web Application Developer), Mr. Bharani (Senior Software Engineer) and Mr. Thambiraj (Mobile Application Developer) from Itech Blooms Pvt.Ltd., along with Mr. K. Rajkumar (Software Engineer) Infosys, Chennai. Nearly 43 students of IEEE members and non-IEEE members of all the societies have participated in the workshop. The event was coordinated by Dr. V.D. Ambeth Kumar, Professor of Panimalar Engineering College, Chennai.



### “Seminar on Cloud Computing”

Panimalar Engineering College, Department of Artificial Intelligence & Data Science in association with IEEE Madras Section, IEEE Computer Society and IEEE Student Branch has conducted “Seminar on Cloud Computing” on 19.09.2022. The event was conducted and co-ordinated by the internal resource person Mrs. V. Sathya, Assistant Professor/AI&DS, Panimalar Engineering College. The programme ended with the discussions and valedictory function. Nearly 45 students of IEEE members and non-IEEE members of all the societies have participated in the seminar.

## Professional Society Activities

### **"Seminar on Immersive Design and Technology"**

Panimalar Engineering College, Department of Artificial Intelligence & Data Science in association with IEEE Madras Section, IEEE Computer Society and IEEE Student Branch has conducted "Seminar on Immersive Design and Technology" on 22.09.2022. The event was conducted and co-ordinated by the internal resource person Ms. K. Malvika, Assistant Professor/AI&DS, Panimalar Engineering College. The programme ended with the discussions and valedictory function. Nearly 60 students of IEEE members and non-IEEE members of all the societies have participated in the seminar.



### **"Seminar on Convolutional Neural Network"**

Panimalar Engineering College, Department of Artificial Intelligence & Data Science in association with IEEE Madras Section, IEEE Computer Society and IEEE Student Branch has conducted "Seminar on Convolutional Neural Network" on 29.09.2022. The event was conducted and co-ordinated by the internal resource person Mrs. V. Sathya, Assistant Professor/AI&DS, Panimalar Engineering College. The programme ended with the discussions and valedictory function. Nearly 59 students of IEEE members and non-IEEE members of all the societies have participated in the seminar.

### **Research Forum**

- Our department was officially recognized as a Research Centre by Anna University in December 2022.
- Prof.Dr.S.Malathi published a significant paper titled "*A mathematical model for cost budget optimization in the early stage of house construction budget analysis*" in the *Journal of Interdisciplinary Mathematics*. This research is indexed in UGC CARE, Scopus, and WOS, highlighting its academic impact.
- Prof.Dr.P.Kavitha filed a patent on 19.08.2022 for "Kdd On Brain Images To Predict Tumor By Rgb Color, Phog And Jpeg Coefficient Filters," which has now been published.
- Prof.Mr.C.Vivek filed a literary/dramatic work titled "An Animated Character That Uses Artificial Intelligence to Represent Emotions During Online Conversations Without Using Emojis or Emoticons" (Diary No. SW-16857/2023) and got it granted.
- Dr. S. Malathi, Dr. P. Kavitha, Dr. A. Hemalathadevi, and Dr. D. Sudha authored the book *Artificial Intelligence and Expert System*, published by Magnus Publications in September 2022 (ISBN: 978-81-957774-1-9).

### **Upcoming Events**

- *Mentor meeting –Feb 2023*
- *Pecteam international conference – March 2023*
- *Class Committee Meeting – March 2023*
- *Women's Day Celebration – March 2023*



## Club Activities



A guest lecture on “Data Science Process and Principles” was delivered by Mrs. S. Priya from Hindustan University.



An expert-led workshop on “Learning, Modelling and Inference with Data” was organized by Dr. K. Mercy, Professor, Rajalakshmi Engineering College.



An orientation program was conducted by Ms. A. Rama Devi from Global Soft Technologies.



A guest lecture on “Visualization, Summarization and Analytics” was delivered by Dr. Leela from Sri Sairam College.

### Student's Corner:

We learn, we try, we build each day,  
With curious minds that find their way.  
In lines of code and data streams,  
We shape tomorrow, chase our dreams.

Through trials, errors, tasks, and tests,  
We give our hope and do our best.  
Step by step, we climb and grow,  
Ready for the future we don't yet know.

- By SAMYUKTHA S P, II – A



- By BALAJI C R, II - C

Stay tuned for more updates in our forth-coming edition. – Prof.Dr.S.Malathi, Prof.S.Vimala

Stay Connected with AI & DS