

SMRITI

**Department of
Computer Science and
Engineering**

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EDITORIAL DESK

It is with great enthusiasm that we present to you *SMRITI*, Volume 13, Issue 3 — a reflection of the dynamic accomplishments and steadfast progress made by the Department of Computer Science and Engineering over the past quarter. This edition encapsulates the vibrancy of our academic environment, marked by high-impact research, industry engagement, and an unyielding commitment to innovation.

One of the major highlights was the successful conduct of **ICCIDS 2025**—an AICTE-sponsored international conference held in collaboration with IFIP and Springer. The conference brought together global thought leaders, with over 300 research paper submissions and keynote sessions by scholars from Purdue University, Carnegie Mellon University, and Istinye University, Turkey. Co-located workshops such as **IVA 4.0** and **TIER 2025** delivered hands-on exposure to GenAI and Retrieval-Augmented Generation technologies, drawing participants from across the country.

Beyond conferences, our department organized workshops on Docker, Kubernetes, Quantum Computing, and Web Development, aimed at equipping both faculty and students with cutting-edge skills. The **ENCENDER 2.0 Project Expo** stood out as a vibrant showcase of student innovation, with interdisciplinary teams presenting solutions aligned with real-world challenges and sustainable development goals.

Our students continue to shine across multiple platforms. From winning hackathons like KHacks! 2.0, “Hack Her thon”, Cyber Hackathon and ACM CodeHer to secure top spots in innovation contests such as **TNSDC Niral Thiruvizha 2.0**, their efforts exemplify creativity and technical excellence. Students have also actively contributed to industry projects through MoUs, particularly in emerging domains like dental AI and sign language recognition systems. Also, we congratulate the V S Sathvika of final year for being recognised as the best outgoing student of SSN.

The launch of the **AI Student Chapter** and technical events under ACM-W and other student-led bodies reflect the growing ecosystem of peer-led learning and leadership. Industrial visits and hands-on training programs have further enriched their practical understanding, bridging academic knowledge with industry relevance.

This edition of *SMRITI* celebrates more than just achievements; it captures the essence of a department that thrives on collaboration, curiosity, and a shared vision for excellence. We express our sincere gratitude to the Management, Principal, faculty, staff, students, and alumni who make these accomplishments possible.

As we continue to grow as a hub of innovation and research, we invite all stakeholders to join us in this journey of transformation and impact.

SMRITI Editorial Team

EXTERNAL INTERACTIONS AND RECOGNITIONS

National Institute for Empowerment of Persons with Multiple Disabilities (Divyangjan)

Dr. T.T. Mirnalinee, Professor and Head/CSE, Dr. R. Amutha, Professor/ECE and Dr. Angel Deborah S,AP/CSE along with Raghul Yadav, Subash, IV year CSE student visited the National Institute for Empowerment of Persons with Multiple Disabilities on 8th April 2025 to get feedback on the Cognitive games developed using the Meta Quest3.



Also, Dr. T.T. Mirnalinee, Professor and Head/CSE, Dr. R. Amutha, Professor/ECE and Dr. Angel Deborah S,AP/CSE along with Jithu Morrison, III year CSE student visited the National Institute for Empowerment of Persons with Multiple Disabilities on 18th March 2025 to get feedback on the Cognitive games developed using the Xbox console. Following this discussion a proposal has been communicated to Dr. Santhosh Kanna, HoD-Therapeutics to submit a joint project proposal to the Government.



DC Members

- **Dr. Saraswathi S** attended the First Doctoral Committee meeting in the Department of CSE, RMD Engineering College, Chennai through online mode on 7-02-2025.
- **D.Venkata Vara Prasad** attended virtual Synopsis DC meeting of Mr.M.Rajeswara Rao, VIT University on 29-1-2025.
- **Dr. Lokeswari Y V** has attended the First DC meeting for the research scholar Mrs. Praba, convened by the supervisor Dr. Chandrasekar, Prof and Dean, St. Joseph's College of Engineering on 19-Feb-2025 at 09:00 AM.
- **Dr. Priyadharsini R** served as DC member for the first DC meeting on 26/1/25 at SRM University, Ramapuram.
- **Dr. Priyadharsini R** served as DC member for the first DC meeting held on 21/2/2025 at Bharath University.
- **Venkata Vara Prasad D**, "Attended virtual synopsis DC meeting for Mr.M.Rajeswara Rao, VIT University on 29-1-2025.
- **Dr. Mirnalinee T T, Prof/CSE** attended synopsis meeting of the research scholar Bhanupriya at RMK Engineering College

External Examiner for Phd Viva Voce

Dr. D Thenmozhi served as an external examiner for Phd Viva Voce for Ms R Mahesh Muthulakshmi on 3rd April 2025 at SIMATS Engineering. Saveetha Institute of Medical and Technical Sciences.

Interactions with Dr. M. Selva Balan, Scientist 'E' (Joint Director), Ministry of Jal Shakti

Dr. T. T. Mirnalinee, Dr. J.Bhuvana, Dr. S.Angel Deborah, Dr. Raghavendrakumar Sakali and Dr. Ajay Kumar Reddy Poreddy attended the interaction session with Dr. M. Selva Balan, Scientist 'E' (Joint Director), Ministry of Jal Shakti, and Head – Instrumentation and Canal Automation on April 12, 2025.

Invited Talks

- **Dr. Dhannya. S. M** delivered a guest lecture on “Introduction to Algorithmic Thinking” at the Department of CSE, Sathyabhama Institute of Science and Technology on 20.02.2025
- **Dr. Bharathi B.** delivered a talk on "Building speech-to-text application" in the Six day Faculty Development Program on “GenAI for Sequential Data: Speech, Language, and More” scheduled on February 12, 2025 in the Department of IT, SSN College of Engineering."
- **Dr. Mirunalini P.** acted as a resource person and delivered a talk on "Transforming Healthcare: The impact of AI in the medical industry" for AICTE Training And Learning (ATAL) FDP on ‘Mastering the Frontier of Artificial Intelligence : Trends, Challenges and Applications’ proposed by Department of Computer Science (UG), Kristu Jayanti College approved by AICTE.

- **Dr. Thenmozhi D**, delivered a talk on "Hands on training on RAG tools" in the 9th Workshop on Text analysis and Information Extraction & Retrieval (TIER 2025) on 12th February 2025.
- **Dr. Thenmozhi D** delivered a talk on "Fine-tuning Pre-trained Language Models" in the Six day Faculty Development Program on GenAI for Sequential Data: Speech, Language, and More" on 11th February 2025.
- **Dr. Sakaya Milton** delivered a talk in the one-day workshop RAMP (Research and Academic Mentorship Program), conducted for the first year students of SSNCE on 25 March 2025.
- **Dr. Bhuvana J** gave a guest lecture on From Compression to Creation: Autoencoders in Generative AI in online event, organized by the IEEE Student Branch, CMR Institute of Technology, Bangalore on March 20, 2025
- **Dr. K. R. Sarath Chandran** AP/CSE acted as a judge for Hack-O-Hire 2025, the hackathon organized by Barclays and evaluated 7 projects through the hackerearth platform.
- **Dr. Suresh J.**,ASP/CSE carried out an external audit (CoE office) at Sona College of Technology, Salem on 21.04.2025
- **Dr. Bharathi B.** delivered a talk on Three-Day Faculty Workshop on Generative AI Models, organized by the Department of Artificial Intelligence and Data Science on 20-02-2025 at St.Joseph's Institute of Technology, Chennai.



- **Dr. S. Lakshmi Priya** acted as a resource person for ATAL FDP on 'Mastering the Frontier of Artificial Intelligence : Trends, Challenges and Applications' at Department of Computer Science (UG), Kristu Jayanti College, Bengaluru on 13-02-2025
- **Dr. Mirnalinee T T, Prof/CSE** delivered a keynote address on sustainability in the international conference SIST STEM organized by Satyabhama university

AICTE Training And Learning (ATAL) FDP on Mastering the Frontier of Artificial Intelligence: Trends, Challenges and Applications



I had the privilege of serving as a resource person for the AICTE Training and Learning (ATAL) Faculty Development Program (FDP) on "Mastering the Frontier of Artificial Intelligence: Trends, Challenges and Applications" on February 13th, 2025, organized by the Department of Computer Science (UG), Kristu Jayanti College, and approved by AICTE.

I delivered a session titled "Transforming Healthcare: The Impact of AI in the Medical Industry", where I had the opportunity to share insights on how AI is reshaping the healthcare ecosystem. The session explored key AI applications in the medical field—including predictive

analytics, medical imaging, robotics-assisted surgeries, and intelligent healthcare systems.

Real-world case studies and use cases were discussed to highlight how AI technologies are enhancing diagnostic accuracy, streamlining workflows, and supporting clinical decision-making. I also addressed important challenges and the growing need for interdisciplinary collaboration.

The final session concluded with a hands-on segment where participants engaged with deep learning models used for report generation and improving diagnostic accuracy. It was encouraging to see active participation and enthusiasm throughout.

I am sincerely thankful to the organizing team at Kristu Jayanti College for the opportunity to contribute to this enriching program and look forward to future collaborations in advancing AI in healthcare.



- **Dr. P. Mirunalini, Associate Professor**

Talk on "Introduction to Algorithmic Thinking" at Sathyabhama Institute of Science and Technology

I had the pleasure of delivering a talk on "Introduction to Algorithmic Thinking" at Sathyabhama Institute of Science and Technology on 20th Feb 2025, where I interacted with an enthusiastic group of first year students keen on sharpening their problem-solving skills. The session focused on the foundational mindset required for designing efficient algorithms—breaking down problems, identifying patterns, and developing step-by-step solutions.



We looked at real-world scenarios that illustrate how algorithmic thinking helps in crafting optimal solutions, and I introduced the students to key concepts like recursion, divide-and-conquer, and greedy strategies through intuitive examples.

The goal was to demystify the process behind problem-solving and show how algorithmic thinking is not just for coding challenges but applicable across disciplines.

It was encouraging to see the students engage with the content, ask thoughtful questions, and express interest in diving deeper into the subject. I look forward to more such opportunities to share and learn together.



Dr. Dhannya SM, Associate Professor

AICTE Training And Learning (ATAL) FDP on ‘Mastering the Frontier of Artificial Intelligence : Trends, Challenges and Applications’

As an invited resource person for the Faculty Development Program on "Mastering the Frontier of Artificial Intelligence: Trends, Challenges, and Applications," I had the opportunity to deliver a three hour session titled “Advancements in AI: From Neural Networks to Pattern Recognition and Beyond” exploring cutting-edge advancements in AI at the Department of Computer science, Kristu Jayanthi College, Bengaluru. The talk was attended by industry professionals and academicians, fostering insightful discussions on the evolving AI landscape.

The session began with an introduction to pattern recognition, emphasizing its role in AI-driven decision-making. I then highlighted the limitations of traditional neural networks, such as scalability and interpretability challenges, paving the way for modern solutions. Key topics included Generative Adversarial Networks (GANs) for synthetic data generation, transfer learning for leveraging pre-trained models, and federated learning for decentralized, privacy-preserving AI. Emerging paradigms like edge AI—enabling real-time processing on IoT devices—and explainable AI (XAI)—ensuring transparency in black-box models—were discussed. Additionally, I covered model



fine-tuning and hyperparameter optimization techniques to enhance model performance efficiently. The session concluded with an interactive Q&A, addressing challenges and future directions in AI research. The engagement from participants reflected the growing interest in harnessing AI's potential across academia and industry.



This experience was enriching, and I extend my gratitude to the organizers for the opportunity to contribute to this

knowledge-sharing initiative.

Dr. S. Lakshmi Priya

Assistant Professor, CSE

INDUSTRY COLLABORATION

- **Dr. Anusha Jayasimhan** and Dr. Raghavendra Kumar, AP/CSE along with 130 students went for an Industrial visit to Torkwell Automation (Cochin) from 27th February 2025 to 1st March 2025.
- **Dr.S.Rajalakshmi, Dr.S.Angel Deborah, Mr.V.S. Pranav, Mr.V.Yashasvee and Mr.Yenumulapalli Venkatasai Ojus** had online meetings with Mr.Ajoy Iphen and Mr. Sree Gururaj Jayachander of Caterpillar on March 21st and 24th, 2025 regarding the progress in the consultancy project.
- A team of 33 students pursuing second year of M.Tech Integrated course, CSE department SP Robotics based out of Bangalore on 1st March 2025. CSE department faculty **Dr.**

Swarnalakshmi Ravi and Physics department faculty Dr.Chandrasekhar accompanied them for the study tour.

- **Dr. Vijayalakshmi A** coordinated an industrial visit to SP Robotics, Bangalore for the students of the CSE Department on March 4, 2025, in which a team of 139 third-year CSE students participated.
- Ai.D project under MoU with Solaiera: Cavity detection model has been finalised with YoloV8 and the model performance has been satisfactory for the customer. Cavity size classification and determination modules were completed. Treatment plan summarization using large language models was also completed this month. Efforts by **Shivanni and Shobika** (Final year UG students) were well received and appreciated by the customer.
- **Dr.S.Rajalakshmi, Dr.S.Angel Deborah, Mr.V.S. Pranav, Mr.V.Yashasvee** and Mr.Yenumulapalli Venkatasai Ojus had online meetings with Mr.Ajoy Iphen and Mr. Sree Gururaj Jayachander of Caterpillar on April 16th, 2025 regarding the progress in the consultancy project.

PUBLICATIONS

Journal Publications

- Pankaj Kumar Raghuwanshi, **Dr. Ajay Kumar Reddy Poreddy**, Balasubramanyam Appina, Priyanka Kokil published on An 'Opinion Unaware' 3D Image Quality Evaluator Using Correlation Features of Scene Components, IEEE Transactions on Instrumentation and Measurement, Vol:74, issue: Art no. 5009611, Clarivate, IF:5.6, Quartile:Q1,
- **Dr. Angel Deborah S, Dr. Rajalakshmi S, Dr. Saritha M, Dr. Milton R S, Praveen Kumar V, Aravind P** and **Dhaneesh V P**, CLSER: Chunk Level Speech Emotion Recognition using Mel and Gammatone spectrogram, Multimedia Tools and Applications, Vol:Online First, issue:-, Scopus, IF:3.0 , Quartile:Q1
- **Dr. Ajay Kumar Reddy Poreddy**, AP/CSE, Enhancing Surgical Laparoscopic Video Quality Assessment With Integrated Feature Fusion Accounting for Sensor and Transmission Distortions, IEEE Sensors Letters, Vol:9, issue:5, Clarivate, IF:2.2, Quartile:Q2

Conference Presentations / Publications

- **Dr. Swarnalakshmi R** presented the paper titled " Smartspice vision: Revolutionizing Spices authentication for enhanced detection and quality grading" on 13th Feb 2025, IFIP Springer International conference.
- **Aditya Krishna Ponnudurai, Swetha J, and Dr. Rajalakshmi Sivanaiah.** 2024. TRO(F)LL or ROFL ? : Exploring Troll Detection in Tamil Memes. In Proceedings of the 21st International Conference on Natural Language Processing (ICON), pages 392–398, December 2024, AU-KBC Research Centre, Chennai, India. NLP Association of India (NLP AI).

- **Dr. Raghavendrakumar Sakali** presented a paper entitled "Preferential Fault-Tolerant based TF32 Floating Point Adder for Mission Critical Systems" at the 33rd IEEE Asian Test Symposium (ATS 2024), held in Ahmedabad for four days from 17-12-2024 to 20-12-2024.
- **Dr. Vijayalakshmi A** Presented a paper entitled ENHANCED TRAFFIC FORECASTING USING DYNAMIC SPATIO-TEMPORAL PATTERN DISCOVERY IN THE 13th international conference on Contemporary Engineering and Technology 2025 by Prince Shri Venkateshwara Padmavathy Engineering College, Chennai during March 22nd and 23rd, 2025.
- **Dr. R. Kanchana** presented a paper titled A Machine Learning-Based Approach for Counting Stacked Objects: A Case Study on Gas Cylinders in Trucks in the FIFTH INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE & SMART COMPUTING (ICAISC-2025) organized by Department of Computer Science & Engineering, Bannari Amman Institute of Technology, Sathyamangalam, Erode, during 20-22 Mar 2025.
- Nithiyanantham, **Vijaya Lakshmi**, Dinesh, and Roshan presented a research paper titled "Enhanced Image Steganography Using Neural Style Transfer" at the IEEE International Conference on Advancements in Electrical, Electronics, Communication, Computing, and Automation, organized by Kumaraguru College of Engineering and Technology, Coimbatore, during April 4-5, 2025.
- **Dr. Nilu R . Salim** has presented a research article titled "Thermal-Visible and Near Infrared-Visible Heterogeneous Face Recognition in Small Scale Datasets" at IEEE BHTC 2025, KLS's Gogte Institute of Technology, Belagavi, North Karnataka, co-hosted by IEEE Bangalore & IEEE North Karnataka Subsection 25-26 April 2025.

Patent Filed

Dr. D. Thenmozhi along with **Abisha E, Nivedhitha Dhanasekaran, Lakshmi Priya B, Sakthi Sairaj** published a patent titled "BrailleVoice: A Language Agnostics Braille Reader" on 23rd March 2025

SCHOLAR INFORMATIONS

- **Dr. Suresh Jaganathan** conducted the course approval DC Meeting for his part-time research scholar Ms. Umamageshwari on 19.02.2025
- **Dr. Bharathi B.** conducted the synopsis meeting for her full-time research scholar, Ms. S. Saranya on 05-02-2025.
- **Dr. Saraswathi S** conducted the first DC meeting for Ms.Ahila B – Part-time Research Scholar on 27.02.2025 at 12.00 PM, online mode, in the Department of Computer Science and Engineering, Sri Sivasubramaniya Nadar College of Engineering.
- **Dr. T.T. Mirnalinee**, HoD & Professor, CSE conducted the confirmation meeting of her Full-Time scholar, Ms. Safiyyah N on the topic “Detecting Parkinson disease using movement disorder“ on 21.02.2025

- **Dr. Thenmozhi D** conducted a confirmation DC meeting for her part-time research scholar Ms. R. Gayathri on 26th February 2025.
- **Dr. Lokeswari Y V** conducted the first DC meeting for the following three scholars on 17-Feb-2025. The meeting was convened to decide on the course work for the scholars and to know the domain expertise of the scholars to define the problem statement. Mrs. Chandrakala G, Mrs. Kadiveti Praveena and Mr. Lakshmikanth Gara
- **Dr. DVV Prasad** conducted the First DC meeting for Ms Tamilarasi on 19-3-2025.
- **Dr. Saraswathi S** conducted the first DC meeting for Ms.Ahila B – Part-time Research Scholar on 27.02.2025 at 12.00 PM, online mode, in the Department of Computer Science and Engineering, Sri Sivasubramaniya Nadar College of Engineering.
- **Dr. Ajay Kumar Reddy Poreddy** has successfully defended his Ph.D. thesis titled "Perceptual Quality Assessment Framework for 3D Images" at the Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Kancheepuram. The viva-voce was conducted on 27th March 2025.
- **Dr. S. Kavitha**, ASP/CSE, conducted the Ph.D. public Viva-Voce Examination of her Full-time Research Scholar Ms. Sheerin Sitara N (19284997138) on 28.04.2025 (Monday) at 10.00 AM. Title of the thesis was “Enhancing Visual Question Answering for Medical Domain with Improved Datasets using Deep Learning Approaches”
- **Dr. Mirnalinee T T**, Prof/CSE convened DC meeting for the research scholar S. Benisha to recommend viva voce panel members

PROJECTS APPLIED

- **Dr. Bharathi B** applied for a project "Project Title: specialized language models deployable on end points with low compute resources, PI: Dr. B. Bharathi, Total Budget: Rs.2872800, Funding Agency: ISRO, Duration: 2 Years
- Project title: Specialized language models deployable on end points with low compute resources, PI: **Dr. Lakshmi Priya S**, Co-PI: **Dr.Dhannya S M**, Budget:(INR) 15,76,600. Funding Agency: ISRO (RESPOND 2024)
- **Dr. Lokeswari Y V** has applied for a external funding on the project titled "Genomic Insights and AI-Driven Precision Medicine for Lung Cancer: Unveiling Genetic Risk and Drug Targets", to Genome India Data Project under DBT on 27 Feb 2025 along with Sri Ramachandra Institution of Higher Education and Research as partnering Institution. Host Institution - PI: Dr. Y. V. Lokeswari, Co PI-1: Dr. D. Venkata Vara Prasad, Co PI-2: Dr. Tanusree Sengupta. Partnering Institution - PI: Dr. Andrea Mary F, CO PI-1 : Dr. Solomon F D Paul, CO PI-2: Dr. M. Manickavasagam, Co PI-3: Dr. Dicky John Davis. Total Budget (INR): 49.97 Lakhs, Duration: 2 Years, Funding Agency: Genome India Data Project under Department of Biotechnology.
- **Dr.S.Rajalakshmi and Dr.S.Angel Deborah** submitted a project proposal titled “Voice Enabled Braille Interpretation Pad” for the possible funding fromTamil Nadu State Council for Science and Technology (TNSCST) under Innovation and Product Development (IPD-2025) scheme on March 24, 2025.

- **Dr. K. R. Sarath Chandran** has submitted the initial proposal titled “Gesture-controlled smart suitcase” to Innovation and Product Development (IPD-2025), Tamil Nadu State Council for Science and Technology (TNSCST) on 24/03/25.
- **Dr. T. T. Mirnalinee** (Professor and Head, CSE) and **Dr. K. R. Sarath Chandran**, submitted the initial proposal titled “Intelligent Robotic Arm for Recognition and Object Picking” to Innovation and Product Development (IPD-2025), Tamil Nadu State Council for Science and Technology (TNSCST) on 24/03/25.
- **Dr. K. R. Sarath Chandran** and **Dr. S. Lakshmi Priya** have submitted the initial proposal titled “Gait reproduction on 3D avatars using sensors (Towards human digital twin)” to Innovation and Product Development (IPD-2025), Tamil Nadu State Council for Science and Technology (TNSCST) on 24/03/25.
- **Dr. Mirunalini P. and Dr. M.Anbuselvi**, ASP/ECE along with 3rd year students of CSE H S Anirudh and T J Tharunithi applied a project titled "Electric Vehicle battery optimization" for TNSCST under innovation and product development schema
- **Dr. Mirunalini P. G.Vaishal Raj and Kevin John Daniel** applied for a project titled "Enhancing Language Accessibility Through Augmentative and Alternative Communication Systems" for TNSCST under innovation and product development scheme.
- **Dr. Angel Deborah, Dr. S. Rajalakshmi, Dr. M. Saritha and Dr. R. S. Milton** submitted a project proposal titled "Touch Enabled Speech based Stress Detecting Kiosk" to TNSCST-IPD on 21st March 2025 .
- Project title:"Health Watch for elderly persons using IoT" is submitted to Innovation and Production Development 2025, TNSCST. PI: **Dr. Suresh Jaganathan**, Co-PI: **Dr. R. Swathika**, AP/IT. Total Budget: Rs.1,00,000.00
- **Dr. Bhuvana J**, Sandhya Giribabu, Shinigdapriya Sathish, Vidarshanaa Saravanel have submitted the project titled 'Smart Navigation Assistance for the Visually Impaired' to Innovation and Product Development 2025 scheme under TNSCST on 24.03.2025
- **Dr. Angel Deborah S,AP/CSE**, alongwith Academic Co-PI: Dr. T. T Mirnalinee and Industry PI: Mr. John Patrick Philip, Chief Solution Officer, Nobl Q LLC,Texas, USA have applied for a Project Titled: AI based Virtual Reality System for Technical and Soft Skill Training, Academic with a Total Budget(INR):1,00,00,000 to the Funding Agency: U.S.-India Science and Technology Endowment Fund

PROJECT UPDATE

- A Revised Project Proposal titled, "Identification of Non-Indigenous Species in Unconstrained Deep-sea Environment using Deep Learning Model" is submitted to the Ministry of Earth Sciences, with **Dr. Suresh Jaganathan, Dr. T. T. Mirnalinee, Dr. R. Priyadharsini, Dr. S. Radha and Dr. G. Satheesh Kumar Gopal as Investigators.**
- **Dr. Prabavathy B. & Dr. T. T. Mirnalinee** have been recognized as the distinguished winner of Shiv Nadar Foundation Collaboration Grants for their joint proposal on AI DIDI: AI Generated Avatar for Digital Inclusion of Deaf Individuals.
- **Rajalakshmi S**, "Harsh Agarwal 2nd Year CSE, Shubham Kumar 2nd Year CSE, Smriti Sethu Narayanan 2nd Year IT under the guidance of Dr.S.Rajalakshmi participated in KHacks! 2.0 an intense 24-hour hackathon organized by Anna University as part of their annual tech fest,

Kurukshetra on February 2, 2025. They demonstrated their project Saksham and secured the Best Track prize under the EdTech category, earning a cash reward of ₹2,500.

- Shalini Venkatesh, I year CSE, Shravanthi.D, I year CSE and Swathi.B, I year CSE under the guidance of **Dr.S.Rajalakshmi** participated in “Hack Her thon”, on the 12th and 13th of February, 2025, held at Sri Venkateswara College of Engineering. They demonstrated their project “human detection using thermal images” and won a Special Mention and a cash price of 1000 rupees.
- **Dr. K. R. Sarath Chandran**, Assistant Professor, CSE, mentored final year CSE students Harini M, Harish Kumar M V, and Mohith A for participating in the innovation ideathon "Jatayu Season 4" conducted by Virtusa. The team has been selected for stage 2 in the competition.

TNSDC - Naan Mudhalvan Niral Thiruvizha 2.0 Hackathon

The following projects have been shortlisted in Top 1000 out of 15,337:

- **Dr. B. Prabavathy** and her Final Year UG students **G. Gnana Sai & Aswath Venkatesh** have submitted their idea titled “Zoom++: An Inclusive Virtual Conferencing Tool for Continuous Indian Sign Language Recognition”
- **Dr. S. Rajalakshmi** and her Final year UG students Sanjai Balajee, Sanjjit S, V S Pranav, Pooja Premnath have submitted their idea titled “Makkal Kural : AI Driven Grievance Redressal System”
- **Dr. S. Angel Deborah** and her Final year UG students Swetha J, Sathvika V S for their idea titled “Virtual Reality based Soft Skill training and tracking system using Machine Learning”

PAPERS REVIEWED

- **Dr.S.Rajalakshmi** reviewed two papers on February 7, 2025 for Scientific Reports - Springer Journal.
- **Dr.S.Rajalakshmi** reviewed one paper on February 12, 2025 for Cluster Computing- Springer Journal.
- **Dr.S.Rajalakshmi** reviewed one paper on February 19, 2025 for the Intelligent Data Analysis journal.
- **Dr.S.Rajalakshmi** reviewed three papers in February 25 and 26, 2025 for Fifth Workshop on Speech, Vision, and Language Technologies for Dravidian Languages (DravidianLangTech-2025) to be conducted at NAACL 2025, Albuquerque, New Mexico, April 29–May 4, 2025
- **Dr. Angeldeborah S** reviewed two papers for International Conference on Wireless Communications Signal Processing and Networking 2025
- **Dr. Angel Deborah S** reviewed three papers for Fifth Workshop on Speech and Language Technologies for Dravidian Languages 2025 on 26th Feb 2025
- **Dr. Angel Deborah S** review two papers for International Conference on Wireless Communications Signal Processing and Networking 2025

- **Dr. Sarath Chandran K. R.** has reviewed 4 papers during February 2025 for WISPNET 2025, International Conference on Wireless Communications Signal Processing and Networking organized by Dept. of ECE, SSN CE.
- **Dr. Lakshmi Priya S** completed the stock verification of labs in the Department of IT, SSNCE on 19-02-2025.
- **Dr.S.Rajalakshmi** reviewed one paper in March 1, 2025 for Journal of Ambient Intelligence and Smart Environments
- **Dr.S.Rajalakshmi** reviewed one paper on March 16, 2025 for the 19th International Workshop on Semantic Evaluation (SemEval 2025), colocated with the 63rd Annual Meeting of the Association for Computational Linguistics conference (ACL 2025) that will be held in Vienna, Austria from July 27 to August 1st, 2025.
- **Dr.S.Rajalakshmi** reviewed one paper in March 26, 2025 for Transactions on Asian and Low-Resource Language Information Processing (TALLIP Journal).
- **Dr. Angel Deborah S** reviewed papers for The 19th International Workshop on Semantic Evaluation 2025 on 14th March 2025.
- **Dr.S.Rajalakshmi** reviewed one paper in April 7, 2025 for the European Journal on Artificial Intelligence
- **Dr. Angel Deborah S,AP/CSE** reviewed one paper for Intelligent Decision Technologies Journal, IOS Press on 21st April 2025.
- **Dr. K. R. Sarath Chandran AP/CSE** reviewed one manuscript for Displays Journal (Elsevier) on 16th April 2025.
- **Dr. Angel Deborah S,AP/CSE** reviewed papers for the IEEE sponsored 5th International Conference on Emerging Techniques in Computational Intelligence, ICETCI 2025 on 28th April 2025.

EVENTS ORGANIZED

- **Dr. J. Bhuvana, Dr. R. Priyadharsini, Dr. S. Angel Deborah, Dr. J. Anusha, Dr. R. Swarnalakshmi** organized the AICTE sponsored Eighth International Conference on Computational Intelligence in Data Science (ICCIDS 2025) during 12-14 Feb 2025 in association with IFIP and Springer.
- **Dr. Prabavathy B.** organized an Outreach Programme on Basics of Web Development using HTML, CSS & JavaScript for Diploma students at free of cost during 12.02.2025 to 14.02.2025.
- **Dr.D.Thenmozhi and Dr.S.Rajalakshmi** organized a one day 9th Workshop on Text analysis and Information Extraction & Retrieval (TIER 2025) with Theme as Retrieval-Augmented Generation (RAG) and Large Language Models (LLMs) on Feb 12, 2025. This workshop is Co-located with Springer – IFIP Event - 04938 – 8th International Conference on Computational Intelligence in Data Science (ICCIDS 2025) conducted by Department of Computer Science and Engineering from Feb 12 to 14, 2025.
- **Dr. Mirunalini P.** along with **Dr.Saritha M.** have conducted 4th Workshop on "Image and Video Analysis (IVA 4.0)", which is co-located with Springer – IFIP Event - 04938 – 8th International Conference on Computational Intelligence in Data Science (ICCIDS 2025) on 12th February, 2025.
- **Dr. T. T. Mirnalinee, Dr. Lokeswari Y V and Dr. Nilu R. Salim** has organized an expert talk which involves industry person in the partial content delivery for the course Principles of

Machine Learning for BE III Year CSE and ME I Year CSE students during 25-Feb-2025, 26-Feb-2025 and 27-Feb-2025 at department of CSE, SSN College of Engineering. Mr. Chennakesha Saka Vice President - Data Head and AI Solutions Architect, Wells Bangalore had delivered the content on Reinforcement Learning, Optimization and dimensionality reduction techniques.

- **Dr. Nilu R Salim** organized a guest lecture titled " Solving Complex Problems: Optimization Techniques and Use Cases" delivered by "Dr. Vivek Kumar Chouhan, Data Scientist, Ford Motors, Chennai on 31.01.2025 for III year CSE students.
- **Dr. R. Kanchana** organized a talk on “Solving problems in Crystal growth using ML “ by Dr.Kentaro Kutsuke, Nagoya University, Japan to the interested students of BE(CSE) III Year and ME(CSE) I year on 8th Feb 2025
- **Dr. R. Kanchana and Dr. Priyadharsini R** organized a guest lecture titled "Mastering Portfolio Reconciliation: Bridging Discrepancies Using Excel” on 3rd February 2025 by Mr. Saravana Kumar, Lead Analyst, BNY
- **Dr. T. Mirnalinee** HoD CSE and **Dr. Angel Deborah S** along with the students of AR/VR stream of Student Coding Club arranged a AR/VR research project demonstration session with Dr. Magesh Chandramouli, Professor of Computer Graphics Technology at Purdue University Northwest and Fellow, Software Sustainability Institute, UK on 13th February 2025. Six different projects were demonstrated by our student and faculty team.
- **Dr. S. Angel Deborah** arranged a session with Professor Magesh for addressing the students interested in exploring graduate degree programs at Purdue University NW.
- **Dr. T. T. Mirnalinee, Dr. R. Kanchana, Dr. Lokeswari Y V and Dr. Nilu R. Salim** organized the expert talk on "Agentic RAG" delivered by Mr. K. Sabarirajan, Senior Machine Learning Engineer, Ford Motors Company on 8 March 2025 between 10:00 AM to 12:00 Noon at department of CSE, SSN. The expert talk was coordinated by Dr. R. Rajavel, ASP/ECE, under the MoU signed between Ford Motors and SSN.
- **Dr. Mirunalini P., Dr.B.Bharathi and Dr.R.Priyadharsini** organized a guest lecture titled "Role of IoT in sustainable Development" by Dr. R. Vijayarajeswaran, Managing Director, VI Micro systems, on 26th March, 2025 for 1st year UG and M.Tech students.
- **Dr. Priyadharsini R, Dr. Raghavendrakumar Sakali, Mr. Ajay Kumar Reddy Poreddy** organised a guest lecture titled "Parallel Processors and Its Challenges" delivered by "Dr. Noor Mahammad SK, Associate Professor, Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Kancheepuram" on "20.03.25" for II year CSE students.
- **Dr. J.Rajeswari, and Dr.R.Kanchana,** have successfully conducted the Skill Development Program / Value Added Course on "Mobile Application Development using Flutter" for all registered CSE department students from 6th to 21st March 2025.
- **Dr. S. Rajalakshmi and Dr. S. Angel Deborah,** Assistant Professors, CSE department organized "ENCENDER 2.0 - A Project Expo" on March 8, 2025 in association with Institution's Innovation Council (IIC). Mr. Vignesh Selvaraj, Founder of Wrexia Technologies LLC, Casper, Wyoming, USA & Founder, Gen Z Real Estate (OPC) Private Limited, India, Mr. Naveen Madhan, CTO, Wrexia Technologies LLC, Casper, Wyoming, USA and Mr. D. Thiageshwaran, Senior Technical Architect, Hippo Video, Chennai evaluated the projects and selected the winners.
- **Dr. Raghavendrakumar Sakali and Dr. Vijayalakshmi A** successfully conducted a one-day workshop on open-source resourcing tools on 21.03.2025 at the CSE Seminar Hall.

Mr. P. Ajay Kumar Reddy, AP/CSE, was the resource person for the workshop. A total of 178 students attended the session.

- **Dr. H. Shahul Hamead and Dr. Anusha Jayasimhan** have successfully conducted a Hands-on Workshop on Kubernetes on 21st March, 2025 for M. Tech CSE (Integrated)-Semester 4 and few Semester 6 students. The sessions were delivered by two industry experts from Nokia, Mr. Krishna Moorthy M and Ramireddy Vinay Reddy.
- **Dr. Angel Deborah S & Dr. S. Rajalakshmi** organized the National Level six day FDP on Quantum Computing and Quantum Machine Learning from March 24th to 29th, 2025.
- **Dr. Dhannya S M** along with the student office-bearers and committee members, has successfully organized the official inauguration of the AI Student Chapter at the CSE Seminar Hall on 7th March, 2025. The Chief Guest for the event was Mr. Selvaraj Shanmugam, Senior Vice President of AI & Generative AI at Exela Technologies, Chennai, who shared his valuable insights with the audience. The event was also honored by the presence of Dr. T.T. Mirnalinee, HoD, CSE, who represented the Principal who could not join due to certain unforeseen commitments. The event saw active participation from the Heads of the Departments, faculty members and students from various departments.
- **Dr. J. Rajeswari**, Assistant Professor, CSE, along with **Dr. B. Prabavathy**, Associate Professor, and **Dr. M. Saritha**, Assistant Professor, successfully coordinated the InnovateX Hackathon 2025, organized by the Department of Computer Science and Engineering, SSN College of Engineering on 10th March 2025. The 12-hour event (8:00 AM – 8:00 PM) was held at the SSN School of Advanced Career Education (SACE), providing a platform for students to showcase their innovation and problem-solving skills.
- **Dr. K. R. Sarath Chandran**, faculty placement coordinator/CSE has organised training sessions for non-placed students from all departments on 08/03/25 and 22/03/2025.
- The ACM-W chapter of the CSE department organized Trailblazers in Tech on March 17, on the eve of Women's Day celebrations.

ICCIDS 2025

AICTE sponsored IFIP Eighth International Conference on Computational Intelligence in Data Science (ICCIDS 2025) organized by Dr. J. Bhuvana, Dr. R. Priyadharsini, Dr. S. Angel Deborah, Dr. J. Anusha and Dr. R. Swarnalakshmi was conducted in the department of Computer Science and Engineering during 12-14 February 2025. The conference inaugural on 13th February 2025 was presided over by Dr. Magesh Chandramouli, Professor of Computer Graphics Technology at Purdue University Northwest and Fellow, Software Sustainability Institute, UK along with Dr. S.Radha, the Principal and Dr. T. T. Mirnalinee, the HoD, CSE. Their presence added immense value to the conference, setting an inspiring tone for the event.

The conference was further enriched by accommodating five Keynote speakers from reputed Universities abroad. It includes:

1. Dr. Magesh Chandramouli, Professor of Computer Graphics Technology at Purdue University Northwest
2. Dr. Rita Singh, Associate Research Professor, Language Technologies Institute, School of Computer Science, Carnegie Mellon University, Pittsburgh, USA

3. Dr. Carolyn Rosé, Professor, Language Technologies Institute and Human-Computer Interaction Institute, School of Computer Science, Carnegie Mellon University, Pittsburgh, USA
4. Dr. Bhiksha Raj Ramakrishnan, Professor, Language Technologies Institute, School of Computer Science, Carnegie Mellon University, Pittsburgh, USA
5. Dr. Şenol Pişkin, Professor, İstinye University, Istanbul, Turkey



This year, ICCIDS 2025 received an overwhelming response with 317 paper submissions from various institutions and research organizations across India and abroad. After a rigorous review process, conducted by 146 expert reviewers from academia and industry, 92 papers were selected for presentation. These papers span across eight specialized tracks, ensuring a diverse range of research domains. Each track was carefully curated to encourage meaningful discussions and innovative solutions to real-world challenges, covering key AI domains such as:

- Computer Vision for Real-World and Smart Applications
- AI for Speech, Text, and Secure Smart Systems
- Transformative AI in Education and Healthcare
- Next-Gen AI for Sustainable Systems

A significant milestone for ICCIDS 2025 is that the accepted papers will be published in the prestigious IFIP AICT series by Springer, further reinforcing the quality and global reach of the research contributions.



Additionally, two pre-conference workshops were successfully conducted on February 12, 2025,

- 9th workshop on Text Analysis and Information Extraction & Retrieval (TIER 2025)
- 4th workshop on Image Video and Analysis (IVA 4.0).

These workshops provided hands-on training and insightful discussions, offering participants a deeper

understanding of emerging technologies and their impact on education and research.

On the whole ICCIDS 2025 was an outstanding platform for innovation and collaboration, fostering insightful discussions on cutting-edge research and advancements. We extend our heartfelt gratitude to all the authors, reviewers, keynote speakers, session chairs, and organizing committee members for their dedication and contributions in making this event a success. A special thanks to our Management, Principal, and our Head of the Department for providing unwavering support in hosting this conference.



- Conference Chairs

ICCIDS 2025- Professor Magesh Chandramouli's visit

The eighth International Conference on Computational Intelligence and Data Science (ICCIDS 2025) was inaugurated on 13th February 2025 by Dr. Magesh Chandramouli, Professor of Computer Graphics Technology at Purdue University Northwest and Fellow, Software Sustainability Institute, UK. His presence added immense value to the conference, setting an inspiring tone for the event.

The ICCIDS 2025 is an IFIP (International Federation for Information Processing) event, organized by the reputed SSN Trust in the SSN Engineering College, Chennai, India. The conference provides an opportunity for researchers, engineers, developers, and practitioners from academia and industry to address experimental, theoretical work and methods in solving problems related to data science.



In his inaugural speech, Dr. Chandramouli emphasized the transformative impact of Computational Intelligence and Data Science in today's digital era. He highlighted the growing influence of AI, machine learning, and immersive technologies such as VR/AR in education, research, and industry. The highly visual, interactive VR approach to training complex tasks holds several cognitive advantages and these allow the trainee to connect largely abstract and concrete concepts, thus

reducing the cognitive load (e.g., memory, attention) on the trainee. With AR (augmented reality), the superimposition of task relevant information on visualizations of the task helps the trainee develop spatial skills and acquire schemas, as well as encourages active participation in the training. During the inaugural address, the annual report of the ICCIDS for 2025 and the conference proceedings were released.

Followed by the inaugural address, Professor. Magesh Chandramouli delivered a keynote talk on “VR/Metaverse applications in computational & STEM education & training”. His expertise in Virtual Reality and the Metaverse shone through as he seamlessly connected cutting-edge technological advancements with practical applications in education and workforce training. By illustrating real-world use cases and groundbreaking research, Professor Chandramouli highlighted how immersive technologies can revolutionize learning experiences, making complex STEM concepts more accessible and engaging. His presentation was not only informative but also thought-provoking, sparking discussions on the future of education in the digital age. His invaluable contributions to the field were highly appreciated by attendees, making his keynote a standout session at ICCIDS 2025.



During the 13th February afternoon session, the AR/VR research team of the department of CSE demonstrated the various works done so far. Around six different projects were demonstrated. Professor Magesh Chandramouli's interaction during the session was truly commendable. His deep expertise in VR and AR applications was evident as he engaged with the research team, offering valuable insights, constructive feedback, and thought-provoking questions. His enthusiasm and keen interest in the projects created an inspiring and intellectually stimulating environment. The team greatly benefited from his perspectives, as he provided guidance on potential enhancements and real-world applications of their work. His support and encouragement were highly appreciated, making the session not only a learning experience but also a motivating one for the researchers involved.



Following the demonstration, the Professor interacted with a team of students interested in pursuing MS degree program at Purdue University, USA. He shared valuable guidance on the application process, research opportunities, and academic pathways available at Purdue. With his vast experience and deep understanding of graduate studies, Professor Chandramouli provided clarity on various aspects such as course selection, research focus areas, and career prospects. His encouraging words and expert advice motivated the students, equipping them with the confidence and direction needed to take the next steps in their academic journey. The interaction was highly enriching, leaving the students inspired and better prepared for their future endeavors.



Overall, Professor Chandramouli's visit was a memorable and enriching experience for all participants, as his expertise, guidance, and enthusiasm greatly contributed to the success of ICCIDS 2025. His presence not only elevated the conference but also inspired researchers and students to push the boundaries of innovation and excellence in Computational Intelligence and Data Science.

4th Pre-conference Workshop on Image and Video Analysis (IVA 4.0)

Theme: Role of GenAI in Computer Vision

Co-located with Springer – IFIP Event - 04938 – 8th International Conference on Computational Intelligence in Data Science (ICCIDS 2025)

February 12, 2025

The IVA 4.0 Pre-Conference Workshop, held as a part of ICCIDS 2025, brought together experts, researchers, and students to explore the transformative role of Generative Models in Computer Vision Applications. Organized by the Department of Computer Science and Engineering, the workshop provided an insightful platform for discussing cutting-edge advancements in image and video analysis.

Workshop Overview

The event commenced with a warm welcome by the organizers, setting the tone for an engaging day of learning and interaction. The inaugural address was delivered by Dr. T. T. Mirnalinee, Head of the Department, who emphasized the growing significance of AI-driven image generation and its impact on various domains.

Technical Sessions

The first session, Introduction to Generative Models, was delivered by Dr. M. Hemalatha, Assistant Professor at MIT Chennai. With her extensive background in deep learning, pattern recognition, and computer vision, she provided a comprehensive introduction to generative models. She discussed the fundamental principles, highlighting how these models enable AI to create, enhance, and manipulate images. The session also explored the evolution of generative models, their mathematical foundations, and their applications in image synthesis, resolution enhancement, and content generation. By the end of the session, participants had a strong understanding of how these models are shaping modern AI-driven visual computing.



The second session, Image Generative Models and Applications, was conducted by Dr. V. Masilamani, Professor at IIITDM, Kancheepuram with over two decades of experience in image processing and machine learning. He delved into the practical applications of generative models, showcasing how they are transforming fields such as medical imaging, security, and content creation. He provided real-world examples of AI-powered vision systems, demonstrating how these models enhance image quality, automate visual tasks, and enable creative AI applications. His session not only deepened participants' knowledge but also sparked discussions on how generative models can be used in interdisciplinary research.

The final session, Hands-on Session on Generative Models for Image Generation, was an interactive workshop conducted by Dr. V. Masilamani. This session allowed participants to gain practical exposure to generative modeling techniques by implementing key concepts in a guided coding environment. Attendees worked on training and fine-tuning generative models, understanding the challenges of real-world deployment, and experimenting with different architectures. The hands-on approach helped bridge the gap between theory and application, giving participants the confidence to explore generative AI in their own research and projects.



Engagement and Interaction

Throughout the workshop, participants actively engaged with the speakers, raising thought-provoking questions and discussing research opportunities in generative AI. The event also included networking breaks, allowing attendees to interact with experts and peers.

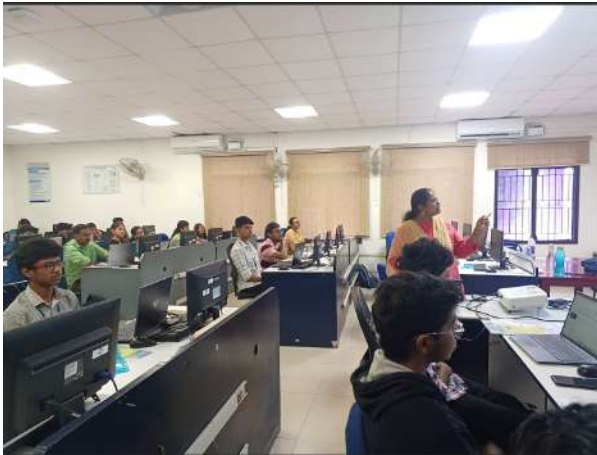
The IVA 4.0 Workshop successfully provided a comprehensive understanding of Generative Models in Computer Vision, equipping participants with the knowledge and skills to explore this rapidly advancing field. As the workshop concluded, attendees were encouraged to participate in ICCIDS 2025, where discussions on computational intelligence, data science, and AI innovations will continue at a larger scale.

A special note of appreciation goes to Associate Professor Dr. P. Mirunalini and Assistant Professor Dr. M. Saritha, whose extended efforts and dedication played a crucial role in making this event a grand success. Their invaluable support in organizing and coordinating the sessions ensured a seamless and enriching experience for all participants.

We extend our heartfelt gratitude to the esteemed speakers, the organizing committee, and all the participants for making IVA 4.0 a highly enriching and successful event.

Vijay Srinivas K, III Year CSE

9th Workshop on Text analysis and Information Extraction & Retrieval (TIER 2025)



Dr.D.Thenmozhi and Dr.S.Rajalakshmi organized a one day 9th Workshop on Text analysis and Information Extraction & Retrieval (TIER 2025) with Theme as Retrieval-Augmented Generation (RAG) and Large Language Models (LLMs) on Feb 12, 2025. This workshop is Co-located with Springer – IFIP Event - 04938 – 8th International Conference on Computational Intelligence in Data Science (ICCIDS 2025) conducted by Department of Computer Science and Engineering from Feb 12 to 14, 2025. 42 participants including Faculty, research scholars and students attended the workshop.



Retrieval-Augmented Generation (RAG) is an AI framework for retrieving facts from an external knowledge base to ground large language models (LLMs) on the most accurate, up-to-date information and to give users insight into LLMs' generative process. RAG is an approach that enhances generative models by incorporating a retrieval mechanism to fetch relevant information from an external knowledge base during the generation process. This enables the model to generate more accurate and informed responses by combining the creativity of generation with the precision of retrieved facts. The objective of this 9th edition of TIER workshop is to provide an opportunity for faculty and researcher scholars to interact with leading persons in language technology, text analysis, information extraction & retrieval and deep learning areas. This workshop aims at meeting a growing interest in NLP among the faculty and scholars. It will give them a comprehensive overview of NLP,

projects/research related to NLP, and an awareness of the tools for working with NLP tasks.



The first two sessions on “Introduction to RAG and LLM” and “RAG tools and Frameworks & Applications of RAG” were handled by Dr.Subalalitha C N, Founder & Director of First Language Technologies and Professor at Department of Computing Technologies, SRM Institute of Science and Technology, Kattankulathur Campus, Chennai.

The third session on “Question Answering using RAG – Tiny BERT” was handled by Mr. B. Senthil Kumar, Associate Professor, Department of Information Technology, Velammal Institute of Technology, Chennai.

The last session on “ChatBot creation using RAG – LangChain” was given by Dr.D.Thenmozhi, Associate Professor, Department of Computer Science, SSN College of Engineering, Chennai. All sessions had hands-on in addition to theory concepts.

Outreach Programme on Web Development using HTML, CSS and JavaScript

The Outreach Programme on Basics of Web Development using HTML, CSS, and JavaScript was organized by the Department of Computer Science & Engineering, SSNCE, from 12th February 2025 to 14th February 2025 for the final year Diploma students from PSB Polytechnic College. The program aimed to provide students with hands-on training and a comprehensive understanding of fundamental web development technologies, including HTML, CSS, and JavaScript. The event was coordinated by Dr. B. Prabavathy.



It was inaugurated by Dr.TT Mirnalinee where she addressed the students and asked them to learn what was going to be discussed with keen attention as these topics would make them industry ready.



She also discussed the importance of front end and back-end development in today's internet world. This was followed by a brief address by Dr. Prabavathy introducing the technologies to develop Web Applications to the participants. Following this, the program was launched and the volunteers started sharing knowledge with the participants.

The programme covered fundamental concepts of HTML, CSS, and JavaScript. Participants were introduced to HTML tags such as p, div, header, table, img, and a, along with creating basic web pages using HTML. CSS topics including types, selectors, properties, box model, cascading and display. JavaScript sessions covered variables, operations, strings, control statements, loops, functions, objects, DOM manipulation, setInterval, setTimeout and other such topics.

The programme also included project-based learning on the 3rd day where participants developed projects incrementally guided by Dr. Prabavathy and later joined by the volunteers. The event concluded with a valedictory session on the final day with awarding chocolates to the top performers in the quizzes conducted during the span of the 3 days in participants participated as teams of 3 to 4 people. The Outreach Programme successfully provided participants with practical exposure to web development concepts and hands-on practice with HTML, CSS, and JavaScript. Students developed interactive projects and gained valuable insights into front-end development. The enthusiastic participation and positive feedback highlighted the effectiveness of the program. The coordinator, the volunteers and the participants of the program would like to extend gratitude to the department and college for this wonderful opportunity.



Student volunteer resource persons from III & II year CSE involved in this programme are as follows:

Pradeep KM	Karthikeyan S	Ram Prasanth P
Oviasree S	Nisha Ganesh	Neha Shanmitha S
Neeharika S	Nivetha Dhanakoti	Keerthana GS
Keerthana K	Paul Andrew S	Manishkumar S
Yukesh M	Pranav	Abishna Anojan

Dr. Prabavathy, Associate Professor

Industrial Visit - 4th Semester

Dr. Anusha Jayasimhan and Dr. S. Raghavendra accompanied 120 students from the 4th Semester - CSE to a three day Industrial Visit to Varkala- Vagamon- Kochi from 27th February- March 1st 2025. They reached Varkala on 27th morning and the entire day was spent admiring the serene views from the pristine beaches. The evening was spent by all the students enjoying the sunset from the Varkala cliff. On the second day, they departed to Vagamon- a green hill station nestled in the midst of Kerala, where everyone enjoyed the beautiful viewpoints, caves and waterfalls. On the last day, they departed to Kochi for the Industrial visit to TorkWell Automation and Controls, which has extensive experience in deploying Industrial Automation systems. They have working relationships with leading OEMs and can provide solutions regarding all Automation needs. The students interacted with the expert minds and tried to learn from their experience on fusing modern robotics and AI technologies with automations. The evening was spent on a cruise boat along the shores of the Kochi backwaters. They finally departed for Chennai on 1st of March and reached Chennai on the morning of 2nd March. Overall, the three-day trip was a perfect blend of educational enrichment and cultural immersion. It allowed students to relax, connect with nature, and simultaneously gain invaluable exposure to the latest developments in industrial automation. The visit not only broadened their horizons but also deepened their understanding of industry-academia synergy.



Industrial Visit - 6th Semester

A team of 139 third-year CSE students from SSN College of Engineering visited SP Robotics in Bangalore on March 4, 2025, accompanied by faculty members Dr. A. Vijaya lakshmi and Dr. T. Arun Luiz. The visit offered a deep dive into robotics, IoT, and industrial automation.

SP Robotics, India's first STEM-accredited Maker Lab, specializes in custom robotics solutions and has a strong presence in 75+ centers across India and leading global institutions like IITs, UBC, and the University of Pennsylvania. Supported by industry veterans including Dr. Ganesh Natarajan, Mr. Lakshmi Narayanan, Mr. CK Ranganathan, and Mr. Ajai Chowdhry, the company pioneers innovations in robotics, AI, drones, AR/VR, and IoT. Interestingly, the company has its roots in Chennai, where it started as an ambitious initiative to make robotics and automation accessible to students and professionals alike.

During the visit, students were given insightful demonstrations, starting with the basics of an EEE on-off circuit used in homes. This provided a fundamental understanding of electrical and electronic control systems, helping students grasp the foundational principles behind automation. Moving beyond the basics, they were introduced to advanced robotics applications, including drones, path-following robots, and India's first-ever traffic police robot. Each demonstration highlighted a specific

industry use case- drones for aerial surveillance and automation, path-following robots for automated logistics and transportation, and the traffic police robot, which showcased how robotics can enhance public safety and urban management.

The students observed how these robots function with sensor-based navigation, real-time decision-making algorithms, and AI-driven automation, giving them a glimpse into the complex interplay between hardware and software in robotics. Experts at SP Robotics explained the custom programming behind each system, showcasing how microcontrollers like Arduino and Raspberry Pi, along with embedded systems, power these intelligent machines. Students were also introduced to machine learning applications in robotics, further expanding their understanding of AI-driven automation.

The industrial visit was an eye-opening experience for the SSN students, reinforcing classroom concepts with real-world



applications. It allowed them to witness automation in action, engage in discussions with industry experts, and develop a deeper appreciation for the role of robotics in shaping the future. The knowledge gained during the visit has inspired many to explore projects, internships, and research opportunities in this domain, further bridging the gap between academia and industry.

Industrial Visit - 4th Semester (M.Tech Integrated)

A team of 33 students pursuing second year of M.Tech Integrated course, CSE department, SSN college of Engineering visited SP Robotics based out of Bangalore on 1st March 2025. CSE department faculty Dr. Swarnalakshmi Ravi and Physics department faculty Dr. Chandrasekhar accompanied them for the study tour.

SP robotics is a startup and a niche player in customized code development for robotics multi-purpose kit. SP Robotics is India's first STEM accredited maker lab. SP robotics (<https://sproboticworks.com/>) is also a co-innovation venture by industry giants namely Dr. Ganesh Natarajan-Ex-CEO of APTECH, Mr. Lakshmi Narayanan- Chairman of Cognizant, Mr. CK Ranganathan – Chairman of Cavin Kare and Mr. Ajai Chowdhry-One of the co-founders of HCL.



They also have maker labs established at IIT-Bombay, IIT-Madras, University of Berkley California (UBC), University of Pennsylvania and so on. They also have a reach in India encompassing 75+ centers across India, 35+ awards etc.

The SSN-CSE students were excited to learn of the applications of Internet of Things (IoT) and Robotics in industrial setup. For example, the path tracing robots demo was shown which could be used for industrial automation in retail, railways, automobile manufacturing and in several places where automatic loading and unloading to be carried out. This can be further extended to collaborative robots (a.k.a cobots) where humans and robots will accomplish a task by collaborating in a manufacturing shop floor.

Another robot was shown which was a miniature of heavy weight-lifting robots. This robot is again used in industries where such weight handling tasks are humanly impossible. The robots were configured with in house customized code making it cheaper and is also compatible with platforms such as Arduino, Raspberry Pi, ESP and so on. They also have specialty products covering a broad range of technologies such as Robotics , Drone , Coding , IOT , VR , AR , AI and Android App and more. Our key takeaways from this visit include utilizing their expertise for getting training in these technologies and enhancing our strengths by participating in hardware hackathons and contests, developing solutions in consultancy projects and industry collaboration initiatives.

PhD Completion



We are delighted to announce that Mr. Poreddy Ajay Kumar Reddy has successfully defended his Ph.D. thesis titled "Perceptual Quality Assessment Framework for 3D Images" on 27th March 2025.

He conducted his research under the supervision of Dr. Priyanka Kokil, Associate Professor at the Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Kancheepuram, and Co-Supervisor Dr. Appina Balasubramanyam from the Indian Institute of Technology Indore.

His thesis was evaluated by Prof. Sumantra Dutta Roy from the Indian Institute of Technology Delhi and Dr. Santhosh Kumar Vipparthi from the Indian Institute of Technology Ropar.

Role of IoT in Sustainable Development

The Department of Computer Science and Engineering, at SSN College of Engineering, hosted a guest lecture, on the 26th of March, 2025, that gave rise to many insightful and impactful ideas, on the topic, "Role of IoT in Sustainable Development". The event was coordinated by Dr. P. Mirunalini and Dr. B. Bharathi and Dr. R. Priyadharsini Associate Professors, CSE department. It was organized to encourage and motivate students in their first year, M.Tech (5YI) and B.E. CSE students, to explore the vast space that is IoT, for sustainable development.

The session opened with an address by Dr. P. Mirunalini, Associate Professor, CSE Department at SSN College of Engineering. She highlighted the achievements of Dr. R. Vijayarajeswaran, Managing Director of VI Microsystems, and enunciated the indispensable use of technology for a sustainable future. Dr. R. Vijayarajeswaran graciously shared his thoughts on the subject and, coupled with his scholarly acumen, delivered a lecture that was both accessible and impactful. He guided students and precisely delineated the use of each IoT component.

- Sensors (Temperature, Humidity, CT) and their applications in environmental monitoring and energy optimization.
- Edge Devices and Gateways, illustrating how simple hardware can be integrated into the broader Internet ecosystem.
- Energy Meters and Variable Frequency Drives, with emphasis on energy efficiency in contexts like BLDC motors and conveyor belts.
- DAC/ADC and PID Controllers, highlighting their critical roles in automation and control.
- Image Signal Processors and the OpenMV n6 & ae3—Python-programmable, low-power chips for advanced visual processing.
- LoRa Devices, including LoRaWAN, BLE, and NRF24Lo1 transceiver modules, celebrated for their ability to communicate efficiently over long distances.

Dr. Vijayarajeswaran's talk was not just a technical report, but conveyed a deeper meaning, weaving together the latest industry developments, including Industrial IoT (IIoT) and the ever-present

influence of AI. He also discussed the arrival of new hardware platforms such as the RP2040, Arduino, ESP32, and Teensy 4.1, each bringing unique strengths to the IoT landscape.

He delved into practical applications—Smart Homes and Buildings, Smart Agriculture, Smart Utilities and Metering, and Smart Supply Chain and Logistics—demonstrating how IoT can, and is reshaping daily life and driving sustainability. The event's highlight was a live demonstration of a Smart Water Level Tracker, a practical and elegant application of IoT. Using float switches, an Arduino microcontroller, and an ESP32 board, the system leveraged LoRa technology to transmit water level data—showcasing a real-world solution for effective water resource management.

The event also saw many students rise up and ask questions regarding pressing topics and future implementations of IoT in their projects, which were patiently answered by the speaker.

Emmanuel Maximus Ravichandran

M.Tech(5Yin) – Ist year

ENCENDER 2.0 - A Project Expo



The Department of Computer Science and Engineering in association with Institution's Innovation Council (IIC) organized "ENCENDER 2.0 - A Project Expo" on March 8, 2025. The event



was convened by Dr. T. T. Mirnalinee, Professor & HOD, CSE department, and coordinated by Dr. S. Rajalakshmi and Dr. S. Angel Deborah, Assistant Professors, CSE department. Mr. Sundaresh Karthic Ganesan and Mr. Chandravel Saravanan were the student organizers.

The objective of this program is to foster innovation and entrepreneurial spirit among students by providing a platform to showcase their completed projects/products. Encender 2.0 aims to kindle students' pursuit in developing market-ready hardware or software products or solutions towards sustainable development goals. The expo featured a diverse range of twelve innovative projects from various departments, including Computer Science and Engineering, Civil Engineering, Biomedical Engineering, Electrical and Electronics Engineering, and Electronics and Communication Engineering. Each team presented their projects through a comprehensive presentation that included the problem statement, proposed solution, novelty in the proposal, deliverables, target beneficiaries,

and technology stack with the project demonstration. The projects were evaluated based on innovation, practical application, technical complexity, and presentation quality.

We thank the Jury members Mr. Vignesh Selvaraj, Founder of Wrexia Technologies LLC, Casper, Wyoming, USA & Founder, Gen Z Real Estate (OPC) Private Limited, India, Mr. Naveen Madhan, CTO, Wrexia Technologies LLC, Casper, Wyoming, USA and Mr. D. Thiageshwaran, Senior Technical Architect, Hippo Video, Chennai for their time, expertise, and dedication in evaluating these projects and awarded the prizes to the winners.

Award-Winning Projects:

First Prize:

Project: "SecUrVote"

Team Members: Saipranav M and Rahul V S (II Year CSE)

Mentor: Dr. S. Lakshmi Priya, Assistant Professor, CSE Department



Second Prize:

Project: "Study of Thermal Characteristics of Fireless Bricks Incorporating Various Waste Materials"

Team Members: Sai Nithin Pojala, Balamurugan A, And Sanjay Rajashekar (II Year Civil)

Mentor: Dr. Srinath Rajagopalan, Associate Professor, Civil Department

Third Prize (Tie):

Project: "T.U.R.P.O (Trustworthy Utility for Reliable Password Organisation)"

Team Member: R Uthaya Murthy (I Year CSE)

Project: "Safe Strive Wearable Band"

Team Members: Kamesh S, Dileep Ram A (II Year M.Tech CSE Integrated), and Vettri Chezhan (II Year M.E CSE)

Mentor: Dr. R. Kanchana, Associate Professor, CSE Department

Other Notable Projects:

- "AI assisted Fall Detection System for Elderly People"
- "E-ATM"
- "Interactive Code Learning Platform"
- "Fake news Detection in Low resource Languages"
- "Thermal Imaging in CSSR operations"
- "Sign Language Translator using Raspberry Pi"
- "Smart Vehicle Security and Safety System: Integration of Theft Detection and Accident Control"



The event concluded with a prize distribution ceremony where certificates and cash prizes were awarded to the winning teams. The event successfully achieved its objective of fostering innovation

and entrepreneurial spirit among students, providing them with a platform to showcase their technical skills and innovative ideas.

Write up from participants:

First of all, me and my teammates hesitated to participate in this competition as it is organized and conducted by computer science department, and we were like what we civil people going to do even though we had a innovative idea related to our stream as all the other participants will be from CSE, IT with projects done using coding. But thanks to the organizers, volunteers who gave us the information that we can also participate as we also have innovative ideas, the department doesn't matter. After a lot of hesitations we participated and did our best in that competition and finally came as runner-up. Again thanks to the organizers, volunteers who made us comfortable and did not let us worry that we were from a non- coding department.

Sai Nithin Pojala, II Year Civil

A Learning Experience Beyond Winning

The much-anticipated Encender 2.0 – Project Expo brought together some of the brightest minds, fostering an atmosphere of innovation and creativity. Hosted with the vision of encouraging students to push boundaries, the event provided a remarkable platform for young engineers to showcase their technical expertise, problem-solving skills, and groundbreaking ideas. The competition witnessed an array of impressive projects, each demonstrating originality, technical depth, and real-world applicability. Participants worked tirelessly to refine their ideas, engage in collaborative discussions, and present their solutions with clarity and confidence. The event was a testament to the hard work and dedication of all the teams, highlighting the spirit of learning beyond the classroom.



The success of Encender 2.0 would not have been possible without the unwavering guidance and encouragement of our esteemed faculty mentors, whose invaluable support played a pivotal role in shaping the participants' learning experiences. At the forefront, Dr. Mirnalinee T Mam, Head of the Department (CSE), provided exceptional leadership, ensuring the event's smooth execution. Alongside her, Dr. Kanchana Rajaram Mam (Project Mentor), Dr. Rajalakshmi Mam, and Dr. S. Angel Deborah Mam offered insightful mentorship, empowering students to make the most of this opportunity. Their dedication to fostering a culture of innovation has been instrumental in making this event a grand success. A big thanks also goes to our dedicated student volunteers, whose efforts contributed significantly to the seamless execution of the event. A heartfelt thanks also goes to the judges, whose valuable feedback, thoughtful critiques, and words of encouragement have helped students refine their projects and gain a deeper understanding of their potential impact. Their time

and expertise have greatly contributed to the participants' growth, reinforcing the importance of continuous learning and improvement.

Encender 2.0 was more than just a competition; it was a journey of learning, perseverance, and teamwork. While awards and recognition add to the excitement, the true takeaway lies in the experiences gained, the knowledge shared, and the inspiration drawn from peers and mentors alike. Each participant leaves with a renewed motivation to innovate and excel, carrying forward the lessons learned into future endeavors.

As SSN College of Engineering continues to nurture young talents and foster a spirit of research and development, events like Encender 2.0 serve as stepping stones toward shaping the next generation of industry leaders and innovators. We look forward to witnessing even greater achievements in the years to come!

Kamesh, II Year M.Tech Integrated CSE

Workshop on Kubernetes and Docker

The Kubernetes workshop held on the 21st of March 2025 featured insightful discussions led by Vinay Reddy R and Krishna Moorthy M, both experts from Nokia. The session covered key aspects of Kubernetes, including its architecture, deployment strategies, container orchestration, and best practices for managing microservices.



The workshop began with an overview of domain and business logic implementation, emphasizing the importance of structuring application logic within the domain layer. A specific example involving Elasticsearch illustrated the need for data separation and single responsibility principles in distributed systems. The speakers explained how Linux namespaces enable containerization and how artifacts work with registries to manage deployments. A brief mention of Gerrit as a version control system encouraged further exploration. A deep dive into Kubernetes architecture followed, where etcd was discussed as the central data store that maintains the cluster's desired state. The session also covered Kubernetes deployment strategies, distinguishing between stateless pods and replica sets, which enable scalability, and StatefulSets, which provide persistent storage and stable network identities. Communication between pods, an essential aspect of microservices, was another key topic.

Helm, a Kubernetes package manager, was introduced as a tool to simplify deployment and manage application lifecycles. The concept of Kubernetes Operators and Custom Resource Definitions (CRDs) was also touched upon, showcasing how users can extend Kubernetes functionalities. The workshop concluded with a discussion on best practices for real-world Kubernetes deployments, offering valuable insights into managing large-scale containerized applications.



INNOVATEX HACKATHON 2025

The Department of Computer Science and Engineering at SSN College of Engineering organized the InnovateX Hackathon on March 10, 2025, at the SSN School of Advanced Career Education (SACE). A total of 98 teams with 367 participants from colleges across Tamil Nadu registered for the event, out of which 21 teams were shortlisted based on innovation and relevance to the hackathon themes. The event officially began with an inauguration ceremony at 8:00 AM, attended by Dr. T. T. Mirnalinee, Dr. Shashikant Albal, and Mr. Aravind Muthuraman with his Presidio team, who also mentored participants throughout the day.



The hackathon started at 8:30 AM with teams working on projects in the areas of Accessibility, AI in Education, Smart Cities, and Agricultural Technology. The first evaluation round took place at 10:30 AM, where teams presented their initial ideas. A second review was held at 12:30 PM to check technical progress, and the final round was conducted at 6:30 PM, where teams showcased their working solutions. Throughout the 12-hour event, participants were provided with Wi-Fi, essential development tools, and food arrangements to keep them energized and focused.



The event concluded with a closing ceremony and prize distribution. Stack Overflowers from SSN College of Engineering won the first prize of ₹10,000, followed by Sproutique from Shiv Nadar University (₹7,000), and The Hack Maverick from Coimbatore Institute of Technology (₹3,000). Judges praised the innovation, effort, and presentation skills of all finalists. Certificates were given to all participants, and the day ended with a heartfelt vote of thanks and networking among students, mentors, and organizers, making InnovateX 2025 a memorable success.

-Hackathon Coordinators

National-Level Six-Day Faculty Development Programme (FDP) on Quantum Computing and Quantum Machine Learning

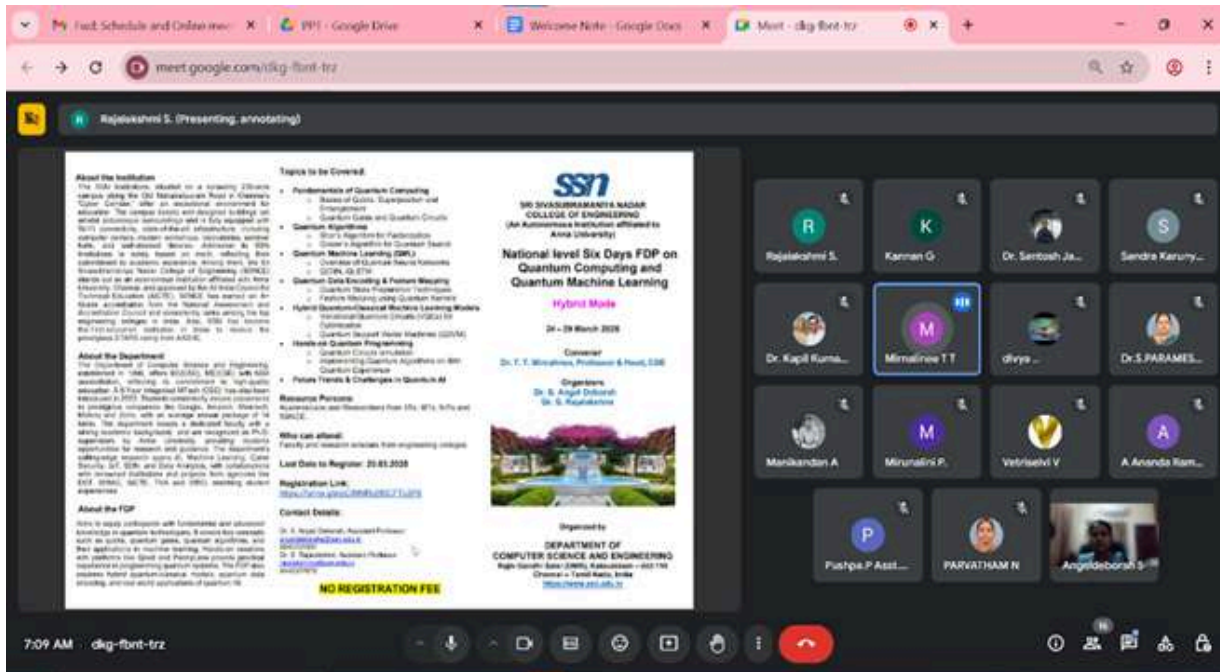
The Department of Computer Science and Engineering organized a National-Level Six-Day Faculty Development Programme (FDP) on Quantum Computing and Quantum Machine Learning from 24th to 29th March 2025. The programme was convened by Dr. T. T. Mirnalinee, Professor and Head of the CSE Department, and coordinated by Dr. S. Angel Deborah and Dr. S. Rajalakshmi, Assistant Professors in the same department.

This FDP served as a platform for distinguished academicians and researchers to impart both theoretical insights and practical training in this rapidly evolving field. Approximately 40 faculty members from across India participated and benefitted from sessions led by the following resource persons:

- Dr. Kapil Kumar Soni, Assistant Professor, Department of IT, NIT Raipur
- Dr. Venkata Subba Reddy P, Associate Professor, Department of CSE, NIT Warangal
- Dr. K. S. Gayathri, Associate Professor, Department of IT, SSN College of Engineering
- Dr. S. Angel Deborah, Assistant Professor, Department of CSE, SSN College of Engineering
- Dr. S. Rajalakshmi, Assistant Professor, Department of CSE, SSN College of Engineering

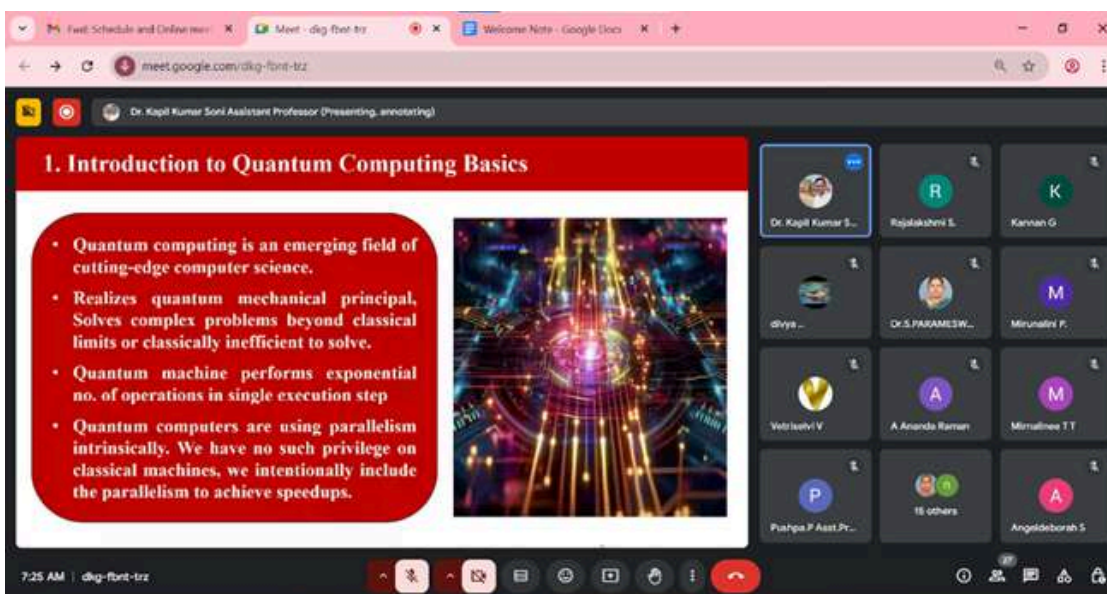
The six-day programme featured two expert-led sessions each evening, covering a broad spectrum of topics. The initial sessions laid the groundwork with fundamental principles of quantum computing

and quantum mechanics. These were followed by hands-on training on quantum gates, qubits, and key algorithms like Shor's and Grover's.



Participants were then introduced to advanced topics such as quantum parallelism, the Deutsch-Jozsa algorithm, and hybrid models including Quantum SVMs and Quantum Convolutional Neural Networks (QCNNs). Additional sessions focused on quantum data encoding, feature mapping using quantum kernels, and the challenges of integrating quantum and classical machine learning techniques.

On the final day, discussions explored emerging trends in Quantum AI, delving into quantum cryptography, security considerations, and ethical implications. The programme concluded with a quiz and feedback session to reinforce learning and gather insights.



Overall, the FDP was a resounding success, fostering academic enrichment, interdisciplinary collaboration, and a deeper understanding of the transformative potential of quantum technologies in the realms of artificial intelligence and machine learning.

FDP Coordinators

Agentic Retrieval-Augmented Generation (RAG)

An expert talk on Agentic Retrieval-Augmented Generation (RAG) was organized by the Department of Computer Science and Engineering (Dr. T. T. Mirnalinee, Dr. R. Kanchana, Dr. Y. V. Lokeswari, Dr. Nilu R. Salim) and coordinated by Dr. R. Rajavel Associate Prof, ECE, on the 8th of March, 2025 to provide insights into the role of AI agents in enhancing retrieval-based generation systems. The session was conducted by Mr. Sabarirajan K, Senior Machine Learning Engineer, Ford Motor Company, who discussed how agentic AI frameworks can be leveraged to improve knowledge discovery, autonomous reasoning, and decision-making processes.

The talk was structured into the following key sections:

Introduction to Large Language Models(LLMs):

In this section, the speaker introduced the students to the basic concepts of LLMs and how LLMs work under the hood, using the “Attention is All You Need” paper by Google. The speaker explained the various drawbacks of LLMs and the traditional fine-tuning approaches.



Introduction to Retrieval Augmented Generation(RAG):

The speaker explained the basics of RAG and how it can be used to combat the various drawbacks of LLMs, citing various real-life examples. The speaker also talked about “Tools” and how these can be used to fine-tune LLMs instead of re-training them.

Introduction to Agentic AI:

The speaker introduced Agentic AI to the students, explaining various agent-based architectures in AI and how agentic models differ from traditional AI systems. The speaker also gave ample examples of how Agentic AI is the new paradigm in the industry and how various organisations are transitioning towards an agentic workflow.

Agentic RAG:

In this section, the speaker talked about how agentic AI workflow could be used to enhance the RAG pipeline. The speaker gave various real-life scenarios where agentic RAGs are used and also conducted a live demonstration of an Agentic RAG workflow where a LLM was given access to a calculator tool to perform mathematical functions. In another demonstration, the speaker showed

how agents can be used to query databases and perform inference on the data, mimicking various roles such as lead software engineer, lead data science engineer, etc.

Following the talk, the audience had an interactive Q&A session where students posed various questions, including:

How agentic AI frameworks could be used in the healthcare industry?

How do automobile companies like Ford utilize agentic workflows?

To what extent have technologies like Agentic AI workflows and Agentic RAG been implemented in industries and what is the future of AI in these industries?

The expert provided detailed responses to these questions, highlighting ongoing research, citing a few of his own research work in this field and practical approaches to address these concerns.

Student Feedback

The session received positive feedback from attendees, with students appreciating the in-depth discussion on agentic AI and agentic RAG. The attendees found the session to be interactive and the live demonstrations helped solidify the understanding of these abstract topics and gave an insight into how these technologies are actually implemented in the real-world. The speaker also mentioned that he would be available to guide future projects related to Agentic RAG, offering mentorship and insights to students interested in exploring this field. Some key takeaways included:



A better understanding of how AI agents can refine retrieval processes.

Insights into real-world applications of RAG beyond NLP.

Encouragement to explore agentic AI frameworks for research projects.

Faculty Feedback

The talk covered about how to generate RAG tools as Python function and invoke them as API in the real time applications like Health care, Insurance, Retail. The speaker's expertise made students to get involved in knowing about the "Attention Algorithm" used in the transformer models and its importance in the GenAI tools. Finally, the speaker invited students to approach him for the projects and start up ideas.

Conclusion

The expert talk on Agentic RAG was highly informative and engaging, offering students and researchers a deep dive into the potential of AI-driven retrieval systems. The session emphasized the transformative impact of agentic AI in advancing research areas such as knowledge retrieval, autonomous decision-making, and AI-powered reasoning. The discussion also opened avenues for future research and interdisciplinary collaboration in AI-powered knowledge augmentation. This talk provided attendees with a fresh perspective on how agentic AI is revolutionizing information retrieval and decision-making, making it a crucial topic for future exploration in AI and computational sciences.

Deepak Chandar Srinivasan, 3RD YEAR

Principles of Machine Learning

The Department of Computer Science and Engineering at Sri Sivasubramaniya Nadar College of Engineering (an autonomous institution affiliated to Anna University, Chennai) organized an Industry Expert Talk on the "Principles of Machine Learning" from 25th to 27th February 2025. The session was coordinated by Dr. T.T. Mirnalinee, Dr. Y.V. Lokeswari, and Dr. Nilu R. Salim, and featured Mr. Chennakesh Saka, Vice President – Data Head & AI Solutions Architect, as the distinguished speaker. The event was attended by a total of 195 participants, comprising III year BE (CSE) students of the 6th semester and I year ME (CSE) students, providing them with valuable insights into real-world applications and advancements in the field of machine learning.

The objective of this session is to enhance student's understanding of Reinforcement Learning and Optimization Techniques through industry-led sessions. Students will learn key RL concepts like Markov Decision Processes, Q-learning, and SARSA, along with exploration vs exploitation strategies. The session also covers Optimization Techniques such as Ordinary Least Squares (OLS) and Conjugate Gradient Methods to improve model accuracy. Industry case studies will provide practical insights into real-world applications. This collaboration helps students bridge the gap between theory and industry practices in machine learning.



The workshop kicked off with an introduction to Reinforcement Learning (RL) by Mr. Chennakesh Saka, who explained how agents interact with environments using state and action spaces. We learned about defining reward functions to guide agents in choosing optimal actions. The concept of discounting future rewards was covered, helping us understand how agents balance short-term and long-term gains. Markov Decision Processes (MDP) were introduced to model environments, followed by insights into policy selection strategies. The session gave us a clear understanding of how RL agents learn through trial and error, supported by practical examples.

The second day of the workshop began with an introduction to SARSA and Q-Learning algorithms, helping us understand how reinforcement learning agents learn optimal actions through rewards and exploration. We were able to compare SARSA's on-policy learning approach with Q-Learning's off-policy strategy, understanding the balance between risk and reward through a real-world case study.

Later, we explored Dimensionality Reduction Techniques (DRT), where concepts like PCA (Principal Component Analysis) and LDA (Linear Discriminant Analysis) were explained. These techniques showed us how to reduce feature space effectively while retaining important information, both with and without target labels.

The session also covered optimization techniques, focusing on Ordinary Least Squares (OLS) and Conjugate Gradient Methods, which help in minimizing errors and improving model accuracy. The hands-on experience made us understand more about it.

The third day of the workshop focused on search approaches used in hyperparameter tuning, where we explored Random Search and Grid Search methods. We learned how Random Search tests random combinations within defined limits, while Grid Search systematically checks all possible combinations across a grid of parameters.

The concept of exploitation and exploration was discussed, helping us understand the trade-off between refining known good solutions and searching for potentially better ones. Through a case study, we applied these search techniques to tune a machine learning model, experiencing how the choice of search strategy can impact both performance and efficiency.



The hands-on activity helped us practically compare different approaches, and understand how proper hyperparameter tuning plays a critical role in building accurate and efficient models.

The three-day workshop provided us with valuable insights into core machine learning concepts, with a special focus on Reinforcement Learning and Optimization Techniques. Through a combination of theory sessions, demos, and hands-on activities, we gained a clear understanding of how agents learn, how dimensionality reduction helps in improving model efficiency, and how effective search techniques enhance model performance. The case studies and real-world examples made the sessions more engaging and gave us a practical perspective on applying these techniques to solve complex machine learning problems. Overall, the workshop was highly informative and interactive, equipping us with industry-relevant skills that will be valuable for our future projects and careers.

Dharunika Sasikumar, III year, CSE-A.

Guest lecture on "Solving Complex Problems: Optimization Techniques and Use Cases"

A Guest lecture on "Solving Complex Problems: Optimization Techniques and Use Cases" was organized by Dr. Nilu R. Salim, Assistant Professor and Dr. R. Priyadharshini, Associate Professor, on 31st January, 2025 for B.E. CSE, 3rd year students. The resource person was Dr. Vivek Kumar Chouhan, Data Scientist, Ford Motors Company, Chennai. The event happened at the CSE Seminar Hall, Department of CSE, SSN College of Engineering. The talk has given insights of various optimization techniques used in Supply Chain Management.

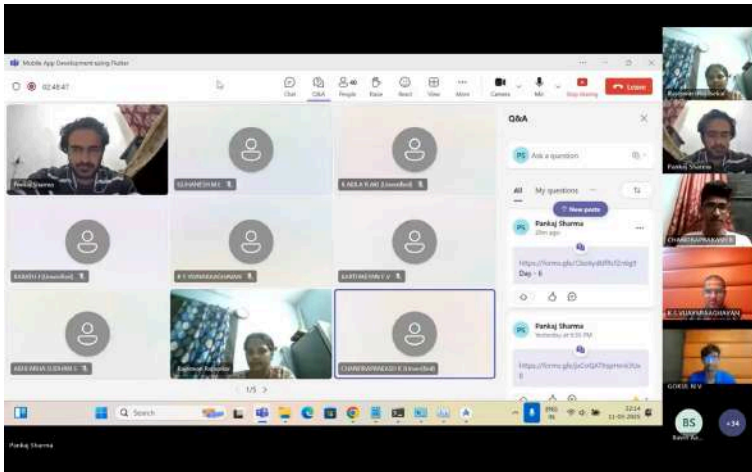


Value-Added Course on "Mobile App Development using Flutter"

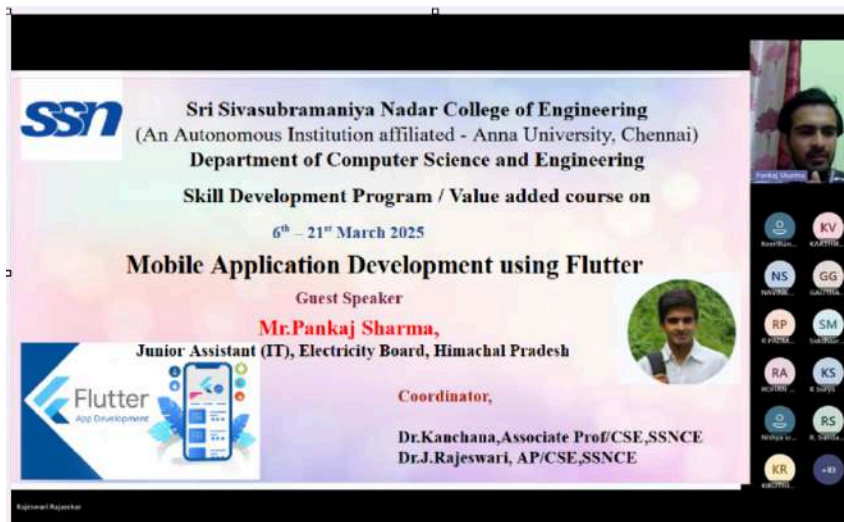
The Department of Computer Science and Engineering (CSE) successfully organized a Value-Added Course on "Mobile App Development using Flutter" from March 6, 2025, to March 21, 2025. Conducted in online mode, the course spanned a total of 20 hours and was designed to equip students with practical skills in mobile application development using the Flutter framework. The course was facilitated by Mr. Pankaj Sharma, Junior Assistant (IT) at the Electricity Board, Himachal Pradesh, whose expertise and guidance proved instrumental in delivering a comprehensive learning

experience. A total of 119 students from Undergraduate (UG) CSE, Postgraduate (PG) CSE, and 5-year Integrated M.Tech (CSE) programs participated, forming 50 teams to collaborate on projects and showcase their skills.

The course commenced on March 6, 2025, with an introductory session covering Flutter basics, Android Studio setup, SDK installation, and emulator configuration. Over the following days, participants delved into key concepts such as Flutter file structure, Dart programming components (including classes, widgets, containers, states, and libraries), and app deployment on both emulators and real devices, including iOS. By March 9, students explored stateless and stateful widgets, lists, and developed their first Dart-based app, while also learning to integrate features like camera, location, and external files into their layouts. The curriculum further introduced SQLite databases, CRUD operations, and Firebase integration on March 10, followed by a session on deploying apps to the Google Play Store and a hands-on practice day on March 11.



A quiz and discussion on problem statements and design took place on March 12, allowing students to refine their understanding and prepare for the culminating project demonstrations. The course concluded with project demo sessions held on March 20 and 21, 2025, where 34 out of the 50 teams presented their work. These demos were evaluated by Mr. Pankaj Sharma, who provided valuable feedback to the participants. The projects showcased a range of innovative ideas and practical applications, reflecting the students' ability to apply the skills acquired during the course.



This value-added course offered an excellent opportunity for students to gain hands-on experience in Flutter-based mobile app development, a highly relevant skill in today's tech-driven world. The structured schedule, combined with expert facilitation, enabled participants to progress from foundational knowledge to deploying functional apps. With 119 students actively engaged and 40 projects successfully demonstrated, the initiative underscored the Department of CSE's commitment

to fostering technical proficiency and innovation among its students. The course not only enhanced their practical expertise but also prepared them for real-world challenges in mobile app development.

Guest Lecture on "Parallel Processors and Its Challenges"

A guest lecture titled "Parallel Processors and Its Challenges" was organized by the Department of Computer Science and Engineering on 20th March 2025 for the Second-Year CSE students. The event was coordinated by Dr. Ajay Kumar Reddy Poreddy, Assistant Professor/CSE, Dr. Raghavendra Kumar Sakali, Assistant Professor/CSE, and Dr. Priyadharsini R, Associate Professor/CSE. The lecture was delivered by Dr. Noor Mohammad SK, Associate Professor, Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Kancheepuram. The session provided valuable insights into the fundamentals of parallel processing, its architectural advancements, and the various challenges associated with its implementation. Students had the opportunity to interact with the expert and gain an understanding of real-world applications and research trends in the field of parallel computing. The department extends its gratitude to the speaker for his engaging session.

Talk on "Solving problems in Crystal growth using ML " by Dr.Kentaro Kutsuke, Nagoya University, Japan



Workshop on Open-Source Resourcing Tools

The Department of Computer Science and Engineering successfully organized a one-day workshop on Open-Source Resourcing Tools on 21st March 2025 at the CSE Seminar Hall. The event was coordinated by Dr. Raghavendra Kumar Sakali, Assistant Professor/CSE and Dr. Vijayalakshmi A, Assistant Professor/CSE.

The workshop featured Dr. P. Ajay Kumar Reddy, Assistant Professor/CSE, as the resource person, who delivered an engaging and informative session. A total of 178 students, comprising 171 First-Year B.E. CSE students and 7 First-Year M.E. CSE students actively participated in the full-day event.

The workshop was structured into two major sessions:

- A demo session in the morning, introducing key concepts and tools.
- A hands-on session in the afternoon, focusing on LaTeX.

The key topics covered during the workshop included:

- Fundamental Concepts of LaTeX
- Creating LaTeX Documents and Presentations
- Resume Writing and Course Material Preparation
- Developing Lecture Slides

All registered participants will receive lecture slides and additional reference materials for further study and practice. The workshop provided a valuable learning platform for students to explore open-source tools and enhance their academic writing and presentation skills using LaTeX. The department appreciates the efforts of the coordinators and the enthusiastic participation of students that contributed to the success of the event.

HACKFEST 2025 -A National Level Hackathon Regional Round on 7th April, 2025

The Department of Computer Science and Engineering conducted the Regional round for HACKFEST



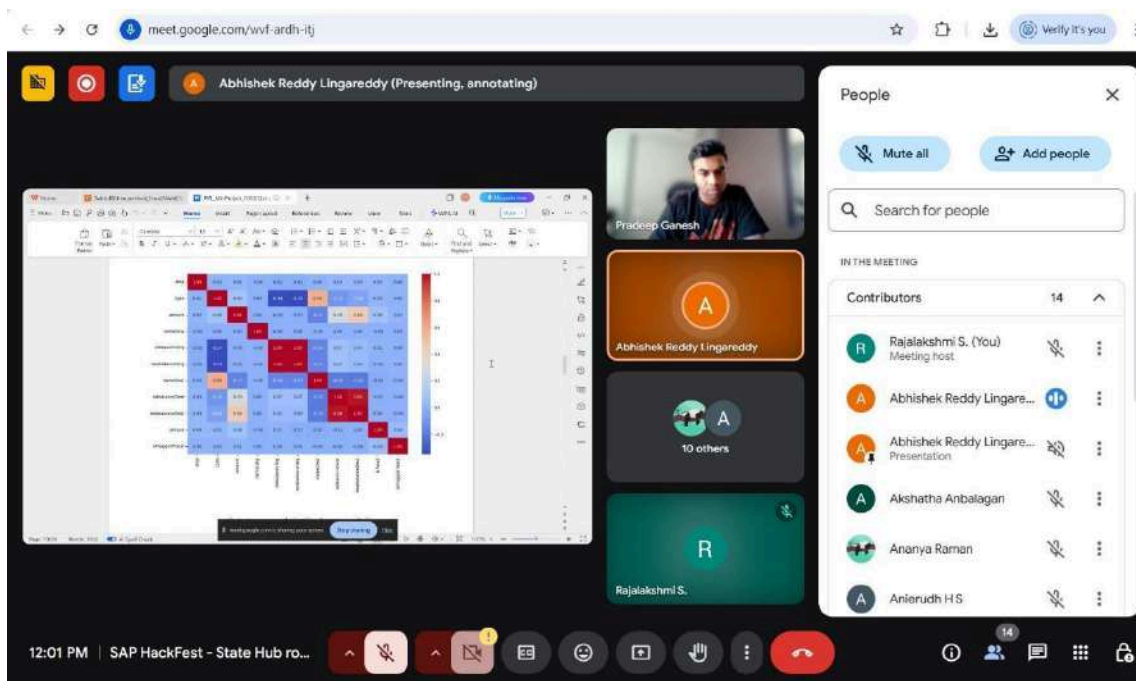
2025, A National Level Hackathon on 7th April, 2025 in association with PSG Institute of Technology

and Applied Research and SAP India. Dr.T.T.Mirnalinee, Dr.S.Rajalakshmi and Dr.J.Suresh organized the regional round.



Twenty five teams from SSN and two teams from SNU registered for the regional round. Three panels each with two faculty members comprising of Dr.D.Venkatavara Prasad, Dr.D.Thenmozhi, Dr.P.Mirunalini, Dr.K.R.Sarath Chandran, Dr.S.Lakshmi Priya, Dr.J.Anusha evaluated the ideas. SAP India selected 10 teams from our college for the next round. State Hub round will be conducted on May 26, 2025 at Chennai Institute of Technology, Chennai.

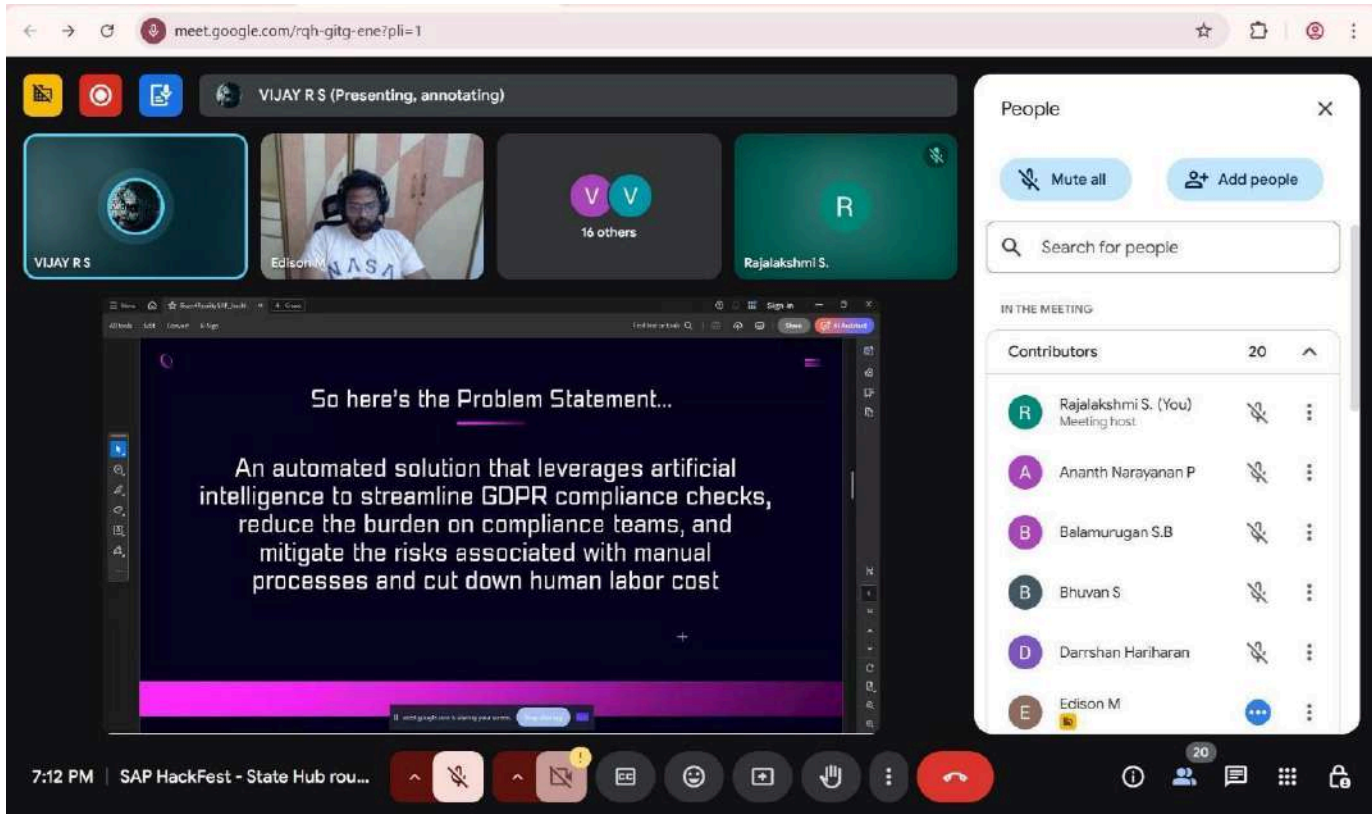
HACKFEST 2025- Online Mentoring Session



An online mentoring session was conducted by Dr. S. Rajalakshmi and Dr.J.Suresh on April 27 and 28, 2025, to support the 10 selected teams for the SAP Hackfest. Mr. G. Pradeep, Software Engineer at Informatica, Chennai, and Mr. Edison, Software Engineer at Google, Bangalore,

interacted with the students.

Eight teams presented their ideas and received valuable feedback and guidance from the industry experts. The experts addressed the students' queries and offered suggestions to enhance their solutions. Students found the session highly useful and appreciated the valuable insights provided by the mentors.



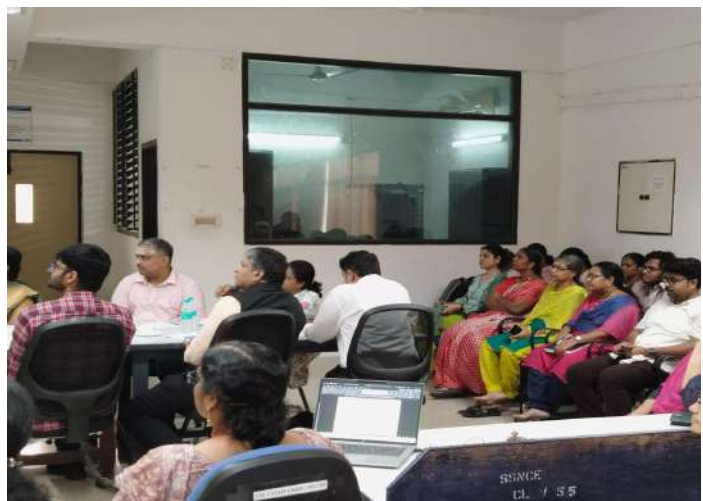
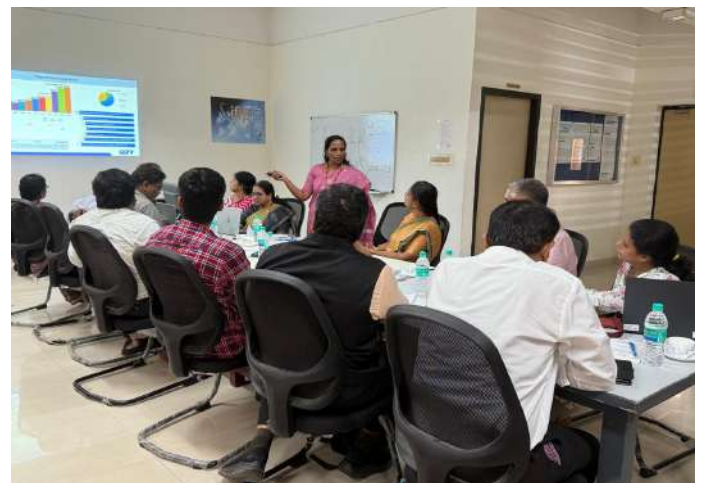
Feedback from a Team

At the beginning of the session, they explained the StateHub round evaluation criteria and how we should tailor our presentation accordingly. With that in mind, each team presented their idea outlining its core concept, stakeholders and impact. After each team presented, they asked us about any potential gaps in our concept, how well it aligned with the evaluation criteria and finally discussed with the team about the idea. For some questions they posed, if we weren't able to answer them, they asked us to think about them and provided some real-world problems we might face and some pointers to help us formulate our answer. We would like to thank the industry seniors and the department for this opportunity.

Board of Studies

The BoS Meeting to approve the B.E. CSE and M.E CSE curriculum and syllabus was held on 26th April 2025. The following are the BoS members

- Dr. Abirami Murugappan, Professor, Department of Information Science and Technology, CEG Campus, Anna University, Chennai.
- Dr.S.K.Noor Mohammad, Associate Professor, Department of Computer Science and Engineering, IIITDM Kancheepuram, Chennai
- Dr.B. Rajesh Kannah, Dean Academics & Head, Department of Computer Science, AI & ML, Rajiv Gandhi National Institute of Youth Development, Sriperumbudur.
- Mr. Rajkannan Rajan, Vice President, Global Markets – Data Services Technology, Barclays, Chennai
- Mr. Prakash Muthudoss NO, Director & Chief Scientific Officer, A2Z4.0 Research and Analytics Private Limited, Chennai
- Mr. Arvind Muthuraman (Batch: 2012-2016, UG-CSE), Associate Director, Application Development, Presidio
- Mr. Pradeep G, (Batch: 2019-2023, UG-CSE), Software Engineer, Informatica
- Ms. Aarthi Ravishankar, (Batch: 2000-2004, UG-CSE), Delivery Manager – Corporate Social Responsibility – Education and Skilling, Tata Consultancy Services, 1/G1, SIPCOT IT Park Navalur, Siruseri, Tamil Nadu 603103
- Mr. Sriram K (Batch: 2014-16 (PG-CSE)), Senior Manager, HDFC Bank (Back office)
- All faculty members of the department.



EVENTS ATTENDED

- **Dr. T. T. Mirnalinee** attended the annual Shiv Nadar Foundation Leadership Conclave at the Shiv Nadar School, Faridabad on 15/02/2025
- **Dr. T. T. Mirnalinee** attended the Synopaia meeting at SRM University on 17th Feb.
- **Dr. B. Bharathi** has participated in 6-day Online Short-Term Training Program (STTP) on "Advances in Speech Technology: Opportunities and Challenges", scheduled from 10th to 15th February 2025 Organized by Sikkim Manipal Institute of Technology, Sikkim.
- **Dr.S.Rajalakshmi** has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on Quantum Computing conducted by Chandigarh University from 10/02/2025 to 15/02/2025.
- **Dr. Raghavendrakumar Sakali**, attended AICTE Training and Learning (ATAL) Academy Faculty Development Program on "Design for Test (DFT) Strategies in AI and Machine Learning SOCs" organized by DMI ENGINEERING COLLEGE, Chennai from 27/01/2025 to 01/02/2025 in online mode.
- **Dr. Raghavendrakumar Sakali** has successfully participated in the online 5-day Faculty Development Program on "Building Web Development Solutions with Cloud Computing" under the "Next Gen Employability Program" from 27-01-2025 to 31-01-2025, conducted as a joint initiative by Edunet Foundation, AICTE TLB, and EY Global Delivery Services.
- **Dr. Suresh Jaganathan**, attended the synopsis meeting of Ms. D. Ramya, Scholar of Dr. C Lakshmi, Professor, SRM University, on 24.03.2025 at SRM University, Kattankulathur.
- **Dr. Mirnalinee T T**, attended the Synopsis meeting at SRM University on 17th Feb , 2025
- **Dr. T. T. Mirnalinee** was invited by Pondicherry university to serve as a speaker in the 3 days workshop on Shaping the future of education- OBE, Quality enhancement, Entrepreneurship and Cybersecurity under AICTE Margdarshan Scheme on 24th March
- **Dr. TT. Mirnalinee** served as Session chair in the 11th International Conference on Biosignals, Images and Instrumentation organised by Department of BME, SSNCE.
- **Dr. R. Kanchana** completed a 10 day workshop on “Women in Leadership Level 1” jointly organized by Malviya Mission Teachers Training Center (MMTTC) at Indian Institute of Information Technology Design and Manufacturing (IIITDM) Kancheepuram and The Sculptors Group (TSG) from 19th December 2024 to 5th January 2025.
- **Dr.S.Saraswathi** attended an Online Faculty Development Programme (FDP) on "Decoding Cyber Attacks and Threat Intelligence Strategies", from 10th March to 22nd March 2025. This FDP is organized by the Electronics & ICT Academy, NIT Warangal, in association with Vellore Institute of Technology (VIT), Chennai, sponsored by the Ministry of Electronics and Information Technology (MeitY), Government of India.
- **Dr. J. Bhuvana**, has attended a seminar on NEP 2020: Vision to Reality on 21. 03. 2025 organized by Internal Quality Assurance Cell (IQAC).
- **Dr. Anusha Jayasimhan** attended the Open House organized by Centre for Innovation, IIT Madras on March 15th, 2025
- **Dr. Anusha Jayasimhan and Dr. R.S. Milton** participated in the Tech debate on "Gen-AI" during the event "A day at Barclays" organized by Barclays on 21.03.2025 with two other panels and won the first prize.



- **Dr.S.Rajalakshmi and Dr.S.Angel Deborah** attended the orientation meeting of Naan Mudhalvan- Niral Thiruvizha 2.0 for the top 1000 teams hosted by TNSDC on March 18, 2025.
- **Dr.J. Bhuvana** has attended ISO Auditors training program on 5 & 6 March 2025 organized by IQAC
- CII Tamil Nadu State Annual Meeting (theme: ‘Tamil Nadu – State of the Future’) was held on 14 March 2025 (Friday) at Hotel Radisson Blu, Guindy, Chennai . Delegates from educational institutions, Tamil Nadu Ministry for Higher education and Ministry for industries and commerce, Private companies leaders, Startup owners, Entrepreneurs participated. **Dr.Swarnalakshmi** department represented SSNCE in this insightful event.
- TCS celebrated the TCS CodeVita Award Ceremony - an event of inspiration, innovation, and excellence – , where the top 25 finalists from 8 regions were shortlisted. The world’s best coder was crowned at TCS Siruseri Chennai, on 21st March 2025. **Dr.Swarnalakshmi** represented SSNCE in this prestigious event.

OTHER ACTIVITIES

- **Dr.S.Rajalakshmi, Dr.K.R.Sarathchandran, Dr.H.Shahul Hameadh and Dr.S.Raghavendra Kumar** conducted the third review for 39 batches of Internally Funded Students' Projects (IFSP 2023-24) sanctioned under STIRS scheme on February 12 to 15 , 2025
- **Dr. T.T. Mirnalinee** received the STIRS sanctioned projects for I/II/III years and PG departments, from President on 5th and 12th Feb 2025

- **Anusha Jayasimhan and Dr. S.M. Dhannya** served as jury members for Vortex Hackathon 2025 conducted by IEEE Students Chapter on 24.02.2025.
- **Dr. Angel Deborah S** acted as a Jury member on 19th and 20th February 2025 for the two day Buildathon, ENVISION 2025 conducted by IEEE Computer Society at SSN Campus.
- **Ms.Jahnvi Murali and Ms. Pooja Premnath** under the guidance of Dr.S.Rajalakshmi submitted the progress report for India AI Fellowship project on February 28, 2025.
- **Dr. Lakshmi Priya S** completed the stock verification of labs in the Department of IT, SSNCE on 19-02-2025.
- **Dr.S.Rajalakshmi** acted as a question paper setter for a subject in the end semester examinations May 2025 of Mepco Schlenk Engineering College (Autonomous), Sivakasi on February 28, 2025.
- **Dr. T. T. Mirnalinee** served as a panel member for SNU Chennai CSE faculty selection board.
- **Dr. Bhuvana J** has conducted stock verification at Data Center on March 18, 2025
- **Dr. Angel Deborah S** had a research discussion on "Quantum Machine Learning" with Dr. Rita Singh, Associate Research Professor, Language Technologies Institute, School of Computer Science, Carnegie Mellon University, Pittsburgh, USA on 4th March 2025.
- **Dr. Angel Deborah S** had a research discussion with Dr. Yifan Chen, Assistant Professor, Center for Research on Health Care, University of Pittsburgh on 19th March 2025.
- **Dr. Poreddy Ajay Kumar Reddy** served as a resource person for a one-day workshop on "Open Source Resourcing Tools" held at Sri Siva Subramaniya Nadar College of Engineering on 21st March 2025.
- **Dr. K. R. Sarath Chandran** was selected as an external subject expert for a question paper setting for a college.
- **Dr. Anusha Jayasimhan**, served as the Session Chair in the IEEE Madras Section Technically Co-Sponsored International Conference on Advanced Computing Technologies (ICoACT-2025) conducted at the P.S.R Engineering College, Sivakasi, Tamilnadu on March 15th, 2025
- **Dr. Mirnalinee T T** served as a panel member for SNU Chennai CSE faculty selection board.
- **Dr.S.Rajalakshmi and Dr.J.Suresh** attended the student briefing session conducted by SAP for the regional round in the National Level Technical Hackathon - Hackfest 2025 on Apr 6, 2025 from 11 am to 12pm.
- The curriculum committee comprising of Dr. T.T. Mirnalinee, Dr. R. Kanchana, Dr. R.S. Milton reviewed the curriculum and syllabus of UG R2024, PG R2025 for the BoS meeting held on 26th Apr 2025. Further the presentation was also reviewed.
- On 12th Apr 2025, Dr. T.T. Mirnalinee and Dr. R. Kanchana organized a Open house meeting for the applicants of ME(CSE). Followed by the meeting, Dr. Kanchana interviewed the candidates. On 28th, 29th and 30th Apr, Dr. Kanchana interviewed the applicants of ME(CSE) and followed up with the candidates who were selected and yet to join the program.
- On 17th Apr 2025, Dr. T.T. Mirnalinee and Dr. R. Kanchana had a meeting with Mr. Deepak and Mr. Puneeth from HiDevs which offers an AI upskilling and career acceleration platform to offer a workshop to the students.

SHAPE 2025

The following projects were guided by the faculty members as part of SHAPE 2025

Project Title	Guide Name	Student Name
A mobile APP for Food delivery	Dr. R. Kanchana	R. Adharsh
Mobile APP for Calorie finder and Fitness	Dr. R. Kanchana	S Vidhyalakshmi
Whack a Mole Memory Game using HTML, CSS and JavaScript	Dr. B. Prabavathy	Emily Nathania J
Green Fields: A VR Journey into Sustainable Farming	Dr. S. Angel Deborah	G.L.Girish Guru Dhayaa

STUDENT ACHIEVEMENT

CO-CURRICULAR ACTIVITIES

- **S.Bhuvanesh of II Year CSE** have participated in Hackerz a National Level Symposium organised by Chennai institute of technology held on Feb 3rd 2025 at CIT Chennai Campus
- **Chandraprakash K of II year CSE** have participated in glitched held during 03.02.2025 organised by Chennai institute of technology at national level, has awarded with participation certificate
- **S.Bhuvanesh of II Year CSE** have participated in Hackerz a National Level Symposium organised by Chennai institute of technology held on Feb 3rd 2025 at CIT Chennai Campus
- **Chandraprakash K of II year CSE** have participated in glitched held during 03.02.2025 organised by Chennai institute of technology at national level, has awarded with participation certificate
- **Mayur ks of II nd year cse** has participated in hackerz -national level technical symposium conducted by the department of computer science and engineering at Chennai institute of technology on 3rd February 2025
- **Paveethiran SK of II year cse** has participated in Hackerz- National level technical symposium organized by Chennai Institute of Technology held at Chennai Institute of Technology, Kundrathur on 03-02-2025
- **Mehanth T of II year cse** has participated in Hackerz- National level technical symposium organized by Chennai Institute of Technology held at Chennai Institute of Technology, Kundrathur on 03-02-2025
- **Munish Madhav M of II nd year CSE** has participated in the Developer's Nightmare event of Trojanz'25 held during 05.02.2025 organized by Chennai Institute of technology at intra college level and **secured 4th place** and won a cash prize of 350 INR
- **Melvin Isaac.I of II year CSE** have participated in Developer's Nightmare of Trojans'25 CIT held on 05.02.2025 organized by Chennai Institute of Technology at national level, CIT campus, Chennai, **secured Third Place** and awarded a cash prize of 700 INR.

- **Melvin Isaac.I of II year CSE** have participated in Webify AI of Talos'25 held on 12.02.2025 organized by Chennai Institute of Technology at national level, CIT campus, Chennai, **secured First Place** and awarded a cash prize of 2,000 INR for the team.
- **Saipranav, Rahul, Ramcharan and Murari** participated in the Envision hackathon hosted by IEEECS SSN on 19.02.2025 under the education track, and succeeded in building a peer to peer learning software with dynamic personalised roadmaps and a virtual currency system to promote the process of teaching learning.
- **Yukesh D of 2nd year Cse** has participated as resource person for the workshop named outreach program on basic web development coordinated by Dr.Prabavathy and also worked as an organizer on 12.02.2025 to 14.02.2025.
- **Janeshvar Sivakumar of III year CSE** has participated in **MITI MUN** organized by Madras Institute of Technology held during 01.02.2025 to 02.02.2025 at MIT campus, Chennai and **secured the award of High Commendation and a cash prize of 4,500 INR.**
- **Ananth Narayanan, Abhinav E, Avaneesh Koushik, Shobith Kumar R, Abhishek Redy Lingareddy of III year CSE** have participated in **IBMZ Datathon** Organized by IBM at international level and have **secured second place globally with a cash prize of 750\$.** They have been invited to attend the IBM-Systems Lab Visit Event organized by IBM from 19th - 20th February 2025 at Bangalore.
- **Nivetha Dhanakoti of III year CSE** participated in the International Conference On "Computational Mathematics In the Era Of Data Science & Artificial Intelligence" (ICCMDSAI-2025) held on 21.2.25 and 22.2.25 organised by Dayananda Sagar College Of Engineering, Bangalore.
- **Rohan R of III Year CSE** has participated in Exlog 2025 held on 18.02.2025 organized by the Mathematics Club at an Inter College Level at SSN College of Engineering, Chennai and **secured the First place** and was awarded a cash prize of 3,000 INR.
- **S.S.Janane, Poojashree.V and Aarthi.A** participated in Pre-vision held by ieee at ssn, secured first place and won a FREE ENTRY PASS to ENVISION 2025 - SSN IEEECS' 2-Day Buildathon on 07-02-2025
- **Isha Venkataraman of 1st year integrated Mtech CSE** participated in the Envision Buildathon held in SSN college of organisation organised by the IEEE computer science society. It took place on 19/2/25 and 20/2/25.
- **Isha Venkataraman(Mtech Cse 1st year)** participated in the Pre-Vision competition held by Ssn IEEE Computer society and **secured third place** and got a free pass to the Envision Buildathon on 07/02/2025
- **K.S.Vijayaraaghavan, Hemnath D and Isha Venkataraman of I year M.Tech Integrated CSE** participated in the IVA Workshop 4.0 as part of the ICCIDS conference pre-Workshop conducted on 12th February at SSN College of Engineering.
- **Rohan V, Shanmugaraj D, Santhiya S, Cathy Anand, Arul mozhi P, Sheerapthi Nath R E, Vidhya.N of ME I year CSE** has participated in Workshop on financial analytics organised by SSN on 3/2/2025
- 37 students of BE and M.Tech CSE participated in the 9th Workshop on Text analysis and Information Extraction & Retrieval (TIER 2025) Theme: Retrieval-Augmented Generation (RAG) and Large Language Models (LLMs) in International Conference on Computational

Intelligence in Data Science (ICCIDS 2025) on February 12, 2025 organized by the CSE department, SSN College of Engineering, Chennai.

- **Bhavana B of CSE A 2nd year** participated in **VITMUN** organised by VIT Vellore on 6,7,8 march 2025 and **won Honourable Mention award**
- **Melvin Isaac of II year CSE** participated in Project discussion for development of an ERP solution and College website for the college named V.S.Isaac College of Education, Arakkonam held on 04.03.2025 . This discussion was organized by the Startup company called Eden Pixel Tech Solutions. Eden Pixel Tech Solutions was started by Melvin and his school mates. I.Melvin Isaac attended this discussion meeting as an employee to discuss the requirements of the project and explain the implementation of the project along with his team.
- **M. Saipranav and Rahul VS of II Year CSE** have participated in Encender 2.0 organised by CSE Department, SSN College, held on March 8 2025, and **won the first prize for the demonstration of their project 'SecUrVote'** and a cash prize as announced by the organisers
- **M. Saipranav, Ramcharan S, Rahul V. S., and Sakthivel T** participated in the InnovateX 12-hour hackathon on March 10, 2025, organized by the CSE Department of SSN College of Engineering. Their team, "StackOverflowlers" secured First Place among 21 teams that qualified for the Final Round. **They were awarded a cash prize of ₹10,000** and were strongly encouraged to further develop their product into a startup. Additionally, they also secured First Place in the Ideation Round, competing against nearly 100 teams.
- **Susmitha P. of II year CSE** has participated in the Idea Fusion event of Innothon'25, held on 21.03.2025, organized by Hindustan Institute of Technology and Science at the State level, Hindustan Campus, Chennai and **secured Second Prize** in collaboration with a friend from another college and was awarded a cash prize of 2,000 INR.
- **Janeshvar Sivakumar of III year CSE** has participated in VITVMUN'25 held during 7.3.2025 and 9.3.2025 organised by VIT,Vellore. He represented the democratic people's republic of Korea in the Disarmament and security Council.
- **Padala Praneetha of III year CSE**, participated in citi bridge program at Citi office Taramani from 03.03.2025 to 07.03.2025, organised by Citi corporate services at State level but in various states and I participated in hackathon on 07.03.2025 and remaining 4 days is a training program and we are given a participation certificate.
- **Prathyangira Devi V C of III year B.E CSE** was invited to attend the TCS CodeVita Award Ceremony held on 21.03.2025, organized by Tata Consultancy Services (TCS). The event took place at TCS Siruseri, Chennai, at the international level. The Career Development Center (CDC) had invited her along with seven other 3rd-year Placement Committee members (a total of eight students) to represent SSN College of Engineering as student guests at this prestigious event.

- **K.S.Harsha Vardhini of III year CSE participated** in the Citi Bridge Program held during 03.03.2025 to 07.03.2025 organized by CITI at state level, Ramanujan IT park Taramani campus, Chennai.
- **V Yuktha of III year CSE** has attended the TCS codevita award ceremony Organised by TCS at international level held at TCS Siruseri on 21th March.
- **Sundaresh Karthic Ganesan of III Year CSE** has participated in the EY Techathon Semi - Finals and Grand Finale from 08.03.2025 to 12.03.2025 organized by EY at the national level in hybrid mode (semi-finals) and on-campus (finals) in the EY, Coral Building in Bengaluru, as the top 0.15% of the participants being among the 11 finalists out of 47 semi-finalists, 6400+ Submissions and 1,50,000+ Registrations.
- **Saisandeep Sangeetham and Shiva Kumar S.V. of III year CSE** have participated in the 8th International Conference on Intelligent Computing held at Panimalar Engineering College for paper presentation and have been awarded a participation certificate on 21-03-2025
- 22 students from B.E and M.Tech CSE participated in the Encender 2.0 - A Project Expo on March 08, 2025 organized by the CSE department, SSN College of Engineering, Chennai.
- **A Ankitha Reddy** of III Year CSE has participated in the National Conference on Climate Justice: Exploring Climate Narratives for an Inclusive and Sustainable Future held during 04/04/2025 and 05/04/2025 organised by the Department of English of AMET University at National level at AMET University, Chennai and presented a paper titled “Unequal Footprints: The Geographical Variability of LLM Environmental Impacts Across the Supply Chain”.
- **Janani Hariharakrishnan** of III year CSE has participated in SSN INTRAMUN 2025 held during 02.04.2025 to 03.04.2025 organized by SSN MUNSOC at Intra state level, SSN College of Engineering, Chennai, secured Special Mention in UNSC committee and awarded a cash prize of 1,900 INR.
- **Nathaniel Christian** of M.Tech-CSE has participated in The SSN SNUC INTRA-MUN held during 2/4/25 and 3/4/25 organized by SSN SNUC intraMUN committee and participated there.
- **R. Sundareswaran** of I year M.Tech-CSE has participated in the SSN-SNUC INTRA MUN held during 02.04.2025 to 03.04.2025 organized by SSN and SNU
- **K S Vijayaraaghavan** of I year M.Tech (Int.) CSE has participated in SSN-SNUC Intra MUN held from 02.04.25 to 03.04.25 organized by SSN -MUNSOC , SSNCE at intra collegiate level , SSNCE , Chennai and was recognized by verbal mention.
- **Nithesh B** 1st year MTech(Int) cse participated In ssn snu intra mun on 2nd and 3rd April in SNU university
- **Vishwajith L K, Sivasriraman P, Anusha K N and Darshan Parthasarathy** of II year M Tech CSE got selected among top 65 teams from the ideation round of DEVSHOUSE'25 and

participation in 48 hour national hackathon organised by VIT,Chennai held during 04.04.25 till 06.04.25

- The team, consisting of **Mokitha S, Sai Geetha M, and Sanjana Y** of II year CSE, under the mentorship of **Dr. S. Angel Deborah** and the AR/VR vertical of the Student Coding Club, secured **first place along with a cash prize of ₹21,000 in ACM CodeHer 2025** held during 5th–6th April 2025. The event was organized by the ACM Student Chapter and College of Engineering, Guindy, and sponsored by MotorQ. Out of 100 teams from various institutions, our students emerged as the winners with their innovative VR application developed under the theme "Gaming for a Cause." Their game engages players as young guardians of sustainability, challenging them to solve immersive puzzles inspired by the United Nations Sustainable Development Goals (SDGs) 6, 7, 11, 12, 13, 14, and 15, in a mission to restore the balance of our planet.
- **First-year CSE-A students Aditya Kumar and Anuvindhya**, mentored by Ms. Vijayalakshmi (AP/CSE), won the Best Prototype Award in the "Empower Her" category at **Cyber Hackathon 2025**, held on 12.04.2025 at VOC College of Engineering, Thoothukudi, organized by the Thoothukudi District Police. Out of 470 submissions nationwide, their team was among the 19 shortlisted.



EXTRA-CURRICULAR ACTIVITIES

- **S.Vishnu Kumar of II year CSE** has participated in NSS Annual Camp organized by Anna University at National level held at SSN, Chennai on 18/02/2025 to 23/02/2025
- **Rohith V of III year CSE** have participated in Kart Endurance Championship Organized by AIMS at National level held at COAST High Performance Racing Track (RVS College), Coimbatore and secured Innovation and **Go-Green Awards on 15/02/2025**
- **Nithesh of M.Tech CSE**, first year participated in wall painting event of YRC club on 2nd Feb 2025
- **Isha Venkataraman (1st year M.Tech CSE)** have participated in the intra college state level memorial trophy competition conducted by Sairam College of Engineering and have secured **third place** with a cash money of Rs. 3000 on 15/02/2025

- **Avanthika Vijayakumar and Steffi Rachel of M.Tech CSE first year** participated in wall painting organised by SSN YRC in Chengalpet district collector office on 5.2.25
- **Akil Celestine A G of II nd year CSE** participated in **SVCE TROPHY (Basketball)** and secured **fourth place** on 04-03-2025 to 05-03-2025
- **Akash A of III year CSE** participated in VITMUN 25 organised by VIT Vellore an inter college National level competition and secured **Honourable Mention** in the AIPPM committee and was awarded with a merit certificate for the same on 07-03-2025 to 09-03-2025
- **Abhinandan.K** of II year CSE has participated in Group Dance Competition organised by NIFT College held at the campus on 07-03-2025
- **Guruprakash K** participated in Saaral Thiruvizha on 10.03.2025 and 11.03.2025 for Dance held in SSN College of engineering Kalavakkam.
- **Abhinandan.K** of II year CSE has participated in Group Dance Competition organised by Ethiraj College held at the campus on 12-03-2025
- **S Hemavarshini** with my 9 other team mates of CSE A second year has participated in dance competition organised by NIFT chennai on 07.03.2025
- **S Hemavarshini** with my 9 other team mates of cse A second year has participated in dance competition organised by Ethiraj on 12.3.2025
- **Aathithya N M** of II year CSE have participated in **inter year football college** event held during 10-03-2025 to 12-03-2025 and 24-03-2025 organized by ssn college and secured **3rd place**
- **Priya Verma** of II year CSE has participated in a 1 week in-person citi bridge training program held during 03.03.2025 to 07.03.2025 organised by Citi Bank at Citicorp Services India Pvt Ltd, Rajiv Gandhi Salai, Taramani, Chennai.
- **Rahul Malaikani** of II year CSE has participated in the group dance competition organized by NIFT Chennai on 07.03.2025.
- **Rahul Malaikani** of II year CSE has participated in the group dance competition organized by Ethiraj college on 12.03.2025.
- **Pranesh K P** of II year CSE has participated & **secured 4th** in cricket Tournament Organized by SVCE inter collegiate state level held at SVCE, Sriperumbudur and awarded with cash prize of 1500 INR on 04-03-2025 to 07-03-2025 & 10-03-2025
- **Pranesh K P** of II year CSE has participated in **Revels Cup Athletics** Organized by MANIPAL University mangalore, intra collegiate national level and **secured various prize / cash prize of 2000 INR 400m Hurdle - Silver High Jump - Gold 4x400m relay mixed - Silver 4x400m relay men's - bronze and ended up with Overall runners in Athletics** on 08-03-2025 to 12-03-2025

- **Malathi** of 2nd Yr CSE Has Participated In Saaral Thiruvizha'25 On 10-03-2025 To 11-03-2025
- **Abhishek R** of III year CSE has participated in the Instincts Fundraiser “No Refund” and it’s practice sessions organised by English Literary Club on 06-03-2025 to 11-03-2025
- **Abishna A** of III year CSE has participated in All India inter University women Chess Tournament Organized by Delhi University Tournament at national level held at Delhi University during 18-03-2025 to 20-03-2025
- **Lavanya Vasudevan** of III year CSE has participated in the event - SMC LIVE - an SSN Fundraiser event organized by the SSN Music club held on 10th March 2025 at the Justice Pratap Singh Auditorium and has attended practice sessions from 3rd March 2025 till 10th March 2025.
- **Rajkumar M, PrabanjanRaj MK and Prashanth GV** have participated in Village Camp held during 17-03-2025 to 22-03-2025 organized by YRC.
- **Pravin M participated** in Village Camp held during 17-03-2025 to 19-03-2025 organized by YRC.
- **S Neeharika** participated in SMC Live 9.0 organized by the SSN Music Club , as part of a fundraiser event for Instincts'25 , held in SSN College of Engineering on 10th March 2025 on 03-03-2025 to 08-03-2025
- **Anierudh HS and Seetharam Killivalavan** of III year CSE has participated in the Dr. AC Muthaih Rolling Trophy 2025 as a part of the cricket team of SSNCE Organized by SVCE at national level held at SVCE, Chennai on 04-03-2025 to 07-03-2025 &10-03-2025
- **Samyuktaa Sivakumar** of III year CSE has participated in Group Dance at Spectrum’25 held on 07.03.2025 organised by NIFT Chennai at national level, NIFT, Chennai.
- **Samyuktaa Sivakumar** of III year CSE has participated in Western Group Dance of Srishti’25 held on 12.03.2025 organised by Ethiraj college at national level at Ethiraj college campus, Chennai.
- **Samyuktaa Sivakumar** of III year CSE has participated in Western Group Dance of Srishti’25 held on 12.03.2025 organised by Ethiraj college at national level at Ethiraj college campus, Chennai.
- **V.Samyuktha** of 1st year Mtech CSE has participated in photography coverage of tamil saaral mandram organised by SSN coe on 11-03-2025
- **R Avantikaa** of 1st Year 5 years Integrated Mtech CSE has participated in Saaral Thiruvizha at SSNCE conducted by Saral Tamil Mandram on 11/03/2025
- **Nithesh B** of 1st year Mtech CSE has participated in the wall painting event on 06.03.2025 organised of ssn yrc
- **Sadhana J** of Mtech CSE integrated I year has actively participated in Village camp organised by SSN - YRC at Thirukazhukundram Government School - Wall Painting on 21.03.2025.

- **Dharika shree.K** participated in village camp which was conducted by SSN YRC at thirukazhukundram . I have actively participated in wall painting inside the government school on 21.03.2025 .
- **Nithesh B** of 1st year Mtech CSE participated In village camp from 20.03.2025 to 21.03.2025 organised by ssn yrc team
- **Mithuna S** of 2nd years Integrated Mtech CSE has participated in ABCD group dance competition organised by rajalakshmi College of engineering, Chennai as a part of College's western dance group, N2K on 15-03-2025
- **Mithuna S** of 2nd years Integrated Mtech CSE has participated in group dance competition organised by Ethiraj college, Chennai on 12 march 2025 as a part of College's western dance group, N2K
- **Siddharth M, Nithish Ra** of II year M.Tech CSE has participated in Cricket Tournament Organized by SVCE at State level held at SVCE, Sriperumbudur and secured participation on 04-03-2025 to 07-03-2025 & 10-03-2025
- **Mithuna S** of II year Integrated Mtech CSE has participated in group dance competition organised by National Institute of Fashion Technology(NIFT), Chennai as a part of College's western dance group, N2K on 07-03-2025
- **Mithuna S** of II year Integrated Mtech CSE has participated in group dance competition organised by Alliance University, Bangalore on 19.03.2025 as a part of College's western dance group, N2K
- **Mithuna S** of II year Integrated Mtech CSE has participated in group dance competition organised by Anna University, Chennai on 08.03.2025 as a part of College's western dance group, N2K
- **Abhinandha K** of II year CSE has participated in Group Dance Competition organised by SRM Kattankulathur College held at the campus on 05-04-2025
- **Dakshata Senthil** II Year CSE has organised the event SYCON for the year 2025 organised by SSN LAKSHYA CLUB from 2/4/25, 3/4/25, 4/4/25 , 7/4/25 , 8/4/25 at the Justice Pratap Singh Auditorium, SSN Campus
- **S Hemavarshini** of CSE A second year participated in dance competition with my n2k teammates on 05.04.2025
- **Madhangi Karimanal** of 2nd yr CSE has participated in the organisation of SSN EDC's flagship event SYCon held at SSN, Chennai. Participated in organisation work during 2/4/25 , 3/4/25 , 4/4/25 , 7/4/25 , 8/4/25
- **Rahul Malaikani** of 2nd year CSE has participated in the Group Dance competition organized by SRM Kattankulathur on 5th April 2025.

ACM Code Infinity Report 2025

The SSN ACM Student Chapter's coding event, Code Infinity 2025, took place on the 21st of February and brought together some of the brightest young minds in programming. Out of 59 registered participants, 51 actively competed in the contest, which was held online from 8 PM to 10 PM IST on the HackerRank platform. The two-hour competition featured a thoughtfully curated set of questions that tested participants across varying levels of difficulty, aiming to sharpen both placement-oriented preparation and algorithmic thinking.

The challenge included a mix of easy, medium, and hard problems. The easier problems, such as Counting Valleys, Sales by Match, and Jumping on the Clouds, were designed to reinforce logical reasoning and control flow. Medium-level questions like Organizing Containers of Balls and Climbing the Leaderboard required a more in-depth understanding of data structures and logical flow. Participants who ventured into the hard section tackled complex problems such as Kundu and Tree and Finding the Running Median demanding advanced algorithmic skills and optimization strategies.

After an intense session of coding, the results were nothing short of impressive. The first prize was secured by Team Conquerors, consisting of Mariya Joevita V, Sinduja S, and Priya Verma, all from the second year of the CSE department. The second place went to Team Nil, represented by Nandini Sree from the final year of CSE. The third spot was taken by Team CO Strikers, a trio of Harivansh B from the second year CSE, and Ponsubash Raj R along with Darshan Parthasarathy, both from the M.Tech Integrated second year. In a special mention, the Team Coders, represented by first-year student Rohan V, also earned recognition for their performance amidst close scoring.

All Contests > ACM Code Infinity 2025

Leaderboard

All Friends Filter by Select filter Type username to compare Compare				
Rank	User	Score	Time	Country
1	sinduja2310751	100.00	3:13:06	
1	nandinisree21121	100.00	4:57:39	
1	harivansh_b	100.00	5:03:51	
1	rohanv2420019	100.00	6:06:12	
5	rahul2310239	82.29	5:07:38	
6	Pranav_77	80.00	3:54:54	
7	keerthana2210578	49.44	4:58:39	
7	rahulivdc	49.44	5:25:26	
9	hanika2410201	44.00	3:29:30	

Code Infinity 2025 turned out to be an exciting and intellectually enriching experience, pushing the boundaries of coding capabilities among students. The SSN ACM Student Chapter extends heartfelt thanks to every participant, volunteer, and organizer who contributed to the event's success. With

such overwhelming enthusiasm and talent on display, the event promises to be a launchpad for many more brilliant contests in the future.

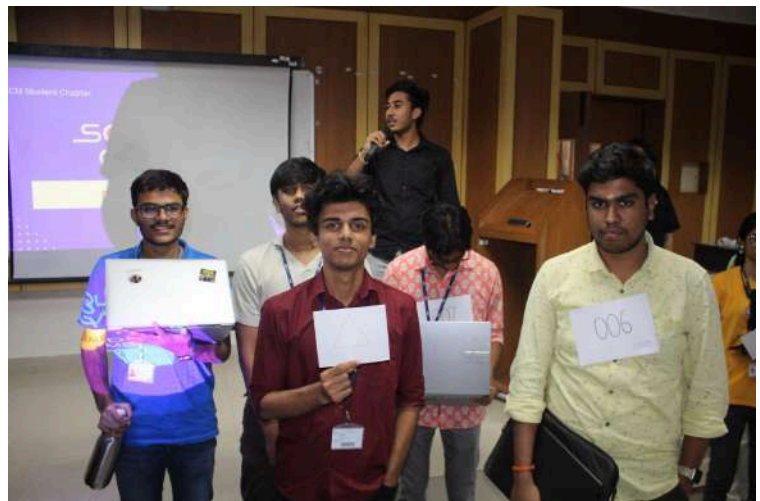
SQUID GAME: Where Tech Meets Survival

On 24th January 2025, the **SQUID GAME: Where Tech Meets Survival** event was an exhilarating and innovative coding competition inspired by the popular Squid Game series. The event tested participants' coding skills, speed, and strategic thinking through four intense rounds. The competition attracted 38 enthusiastic students, eager to showcase their programming abilities in a high-stakes environment.

The competition was structured into four challenging rounds, each inspired by a game from the Squid Game series but adapted to include technical problem-solving elements. Each participant was given three lives at the beginning of the competition. If a participant lost all three lives, they were eliminated.

Round 1: Red Light, Green Light – Code Only When Not Seen

- Participants were seated at desks with their laptops.
- A simple coding problem was given.
- Participants could only code when the 'Green Light' was active.
- If caught typing or moving the cursor during 'Red Light,' they lost a life.
- Participants who failed to complete the task within the time limit lost a life.
- If a participant lost all three lives, they were eliminated.



Round 2: Dalgona – The Shape of the Challenge

- Participants chose from four available shapes, each containing a coding question of varying difficulty.
- They had to solve the question within a common time limit.
- Failure to complete the task within the stipulated time resulted in losing a life.
- Engaging in malpractice also led to losing a life.
- If a participant lost all three lives, they were eliminated.

Round 3: Tug of War – Team Coding Showdown

- Participants were grouped into teams of 5.
- Two teams competed against each other in each match.
- A moderately difficult coding problem was given.
- The team that submitted the correct solution first won the round.
- All losing team members lost one life.

- If both teams failed to solve the problem, all team members lost one life.
- If a participant lost all three lives, they were eliminated.



Round 4: Marbles – Russian Roulette of Trust and Betrayal

- Participants were asked to equally divide themselves into teams.
- Each participant carried forward their remaining lives from the previous rounds.
- A marble was passed around within each team while music played.



- When the music stopped, the participant holding the marble was asked a basic technical question, which they had to answer within 10 seconds.
- **Correct Answer:** No lives lost.
- **Wrong or No Answer:** The participant lost one life.
- The process continued, with teams being merged progressively.

- The game continued until only one player remained, who was declared the winner.
- If a participant lost all three lives, they were eliminated.

After completing the third round, the remaining 13 players collectively decided to withdraw from the game and end the competition. As per the rules, the **prize pool of ₹800** was equally distributed among all surviving players.

The participants proceeded to play Round 4 for fun, and at the end of the game, **Nithyasree M** secured **1st place**, with **Varsha M** receiving recognition for her outstanding performance throughout the event.

The **SQUID GAME: Where Tech Meets Survival** event was a thrilling and intellectually stimulating experience for all participants. The innovative format of the competition kept everyone engaged, fostering a competitive yet enjoyable atmosphere. The event successfully combined problem-solving skills with an element of strategy and suspense, making it one of the most memorable coding competitions.

Volunteers were present throughout the event to properly oversee and ensure the smooth conduct of all rounds.

Treasure Hunt - ACM 2024-25 Event Report

SSN ACM's spin of a tech-based fun filled event was the "**Treasure Hunt**", organized by the **SSN ACM Student Chapter** on **March 28th, 2025**. The event kicked off at **12:50 PM at the Flagpost**, with an enthusiastic turnout of **25 teams**, each consisting of **2-3 participants**.

Participants embarked on a thrilling quest across the campus, deciphering **intricately crafted clues** that led them to various locations, including the



Library, CSE Annexure, Clock Tower, CDC Stairs, ECE Department, Rishab's, Printing Shop, and Mini Auditorium, before reaching the **final destination at the Fountain**. Each QR code provided clues and a unique keyword, forming the final phrase: "**Celestial rivulets etch cryptic sonnets upon shining silvered ruins.**"

The event saw **intense competition**, with teams racing to crack the riddles and navigate through SSN's landmarks. The blend of logical thinking, teamwork, and campus exploration kept participants engaged throughout the **three-hour challenge**.

The Treasure Hunt was met with **overwhelming enthusiasm**, as students from **all years and departments** joined in. The event concluded with **winners being announced at the Fountain**, marking a **hugely successful** and **memorable** experience for all. The **SSN ACM Student Chapter** extends gratitude to the **student coordinators, volunteers**, as well as **faculty coordinator Dr. N. Sujaudeen**, for their efforts in making this event a grand success.

Event Photos:



AI Student Chapter - Inauguration



The AI Student Chapter organized its official inauguration at the CSE Seminar Hall on 7th March, 2025. This event underscored the club's mission to foster innovation and leadership among students while promoting AI for all. The ceremony was honored by the esteemed Chief Guest, Mr. Selvaraj Shanmugam, Senior Vice President of AI and Generative AI at Exela Technologies, who shared his valuable insights with the audience. The event also witnessed the presence of Dr. T.T. Mirnalinee, Head of the Department of Computer Science and Engineering, along with faculty-in-charge

Dr. S. M. Dhannya, who played a pivotal role in organizing the event. Additionally, Heads of Departments, faculty members and students from various disciplines across the college graced the occasion, further enriching the event with their support and participation.

The inauguration commenced with a warm welcome to the distinguished guests, Heads of Departments from various disciplines, faculty members, and students across all four years, delivered by Poojitha Shree V, Joint Secretary



of the AI Student Chapter. The event was seamlessly compered by Nandini Sree, a member of the

Technical Team of the AI Student Chapter, who guided the proceedings with grace and enthusiasm. Following this, Pooja Premnath, President of the AI Student Chapter, addressed the gathering, emphasizing the diverse applications of AI across different departmental disciplines within the college. She highlighted how AI is transforming fields such as engineering, healthcare, business, and education, reinforcing its interdisciplinary impact and the chapter's mission of making AI accessible to all.



Building on this vision, Dr. T.T. Mirnalinee, HoD of the CSE Department, delivered an inspiring address, underscoring the chapter's crucial role in cultivating technical expertise and driving AI innovation within the institution. This was followed by an introduction of the Chief Guest, Mr. Selvaraj Shanmugam, by Dr. S.M. Dhannya, who also addressed the gathering, emphasizing the importance of AI education and research in shaping the future. She highlighted the importance of building strong domain and AI foundations, interdisciplinary and multidisciplinary approach to problem solving as well as focusing on use cases tailored to our society.



After this, the official inauguration of the AI Student Chapter took place with the traditional lighting of the lamp, symbolizing the beginning of a journey toward knowledge, growth, and technological advancement. As part of this momentous occasion, the chapter pledged to position India as a Vishwa Guru in AI by driving innovation, ethics, and education. With this commitment, it aims to integrate AI across disciplines, foster research, prepare students for AI-driven industries, and promote ethical AI for societal benefit, reinforcing its mission to make AI accessible to all.

This was followed by an insightful session by Mr. Selvaraj Shanmugam, where he provided valuable insights into the growth of AI and Generative AI in the professional world while discussing its ethical challenges and industry impact. He discussed various common questions that students tend to have with respect to the fast changing landscape of Generative AI. A key highlight of the event was the Live Demo - Integrating Generative AI on Web Pages, presented by Samah Syed S and Vijay Srinivas K, offering a hands-on look at AI's real-world applications in web development.



As
a

token of appreciation, Mr. Selvaraj Shanmugam was presented with a memento by the HOD. The gesture symbolized the chapter's gratitude for his time and the wisdom he imparted during the event.

The event also featured the introduction of the office bearers, team members and departmental student POCs of the AI Student Chapter, whose efforts drive collaboration and innovation across disciplines. Their dedication ensures the seamless integration of AI initiatives, inspiring students to



explore its applications in their respective fields.

To add an element of excitement, the event concluded with a surprise logo design competition for the AI Student Chapter at SSN. Participants were challenged to create a logo that embodies the chapter's "AI for All" mission using Generative AI tools. The winning design, selected based on creativity, originality, and relevance, will serve as the official identity of the AI Student Chapter, with the winner receiving special recognition at the launch event.

The inauguration ceremony concluded with a vote of thanks delivered by Micheal Berdiananth, Vice President of AI Student Chapter. He expressed heartfelt gratitude to the Chief Guest, Heads of Departments from various disciplines, faculty members, and students for their support and participation in the event.



Meet the Team: AI Student Chapter, SSN

The AI Student Chapter is driven by a dedicated team of passionate individuals committed to fostering innovation, collaboration, and AI-driven learning. The team comprises student leaders, faculty mentors, and representatives from various disciplines, ensuring a diverse and inclusive approach to AI education and research.

Faculty Incharge

Dr. Dhannya SM - Assistant Professor, CSE

Office Bearers

- Pooja Premnath – President (4th year, CSE)
- Ananth Narayanan P - Secretary (3rd year, CSE)
- Micheal Berdiananth M - Vice President (3rd year, CSE)
- Poojitha Shree V - Joint Secretary (3rd year, ECE)

Committee Members

• Technical Team

- Nandini Sree - 4th year, CSE
- Nandana M - 3rd year, IT
- Karthikeyan S - 3rd year, CSE
- Justin Benito B - 3rd year, ECE
- Samah Syed - 3rd year, CSE

- Shobith Kumar R - 3rd year, CSE
- Harish R-3rd year, EEE

• Department Representatives

- Shakeel J - 3rd year, BME
- Mohit Sandeep - 3rd year, EEE
- Aathi Sankar - 3rd year, ECE
- Sudharshan PS - 3rd year, IT
- Mohamed Javeed A - 3rd year, Mech
- Yaanis Hadriyan J - 3rd year, Civil
- Men Madiyan - 3rd year, Chem
- Nithya Manikandan - 1st year, MBA

• Event Management Team

- Vijay Srinivas K - 3rd year, CSE
- Shakeel J - 3rd year, BME
- Srinidhi L - 3rd year, CSE
- Janani Hariharakrishnan - 3rd year, CSE
- Keshavraj S - 3rd year, EEE

• Design/Graphics Team

- Hannah S - 3rd year, CSE
- Yuvapriya N - 3rd year, CSE
- Dilsha Singh - 3rd year, CSE

PR/Sponsorship Team

- Mugilkrishna D.U - 3rd year, CSE
- Samyuktaa Sivakumar - 3rd year, CSE

Webmaster Team

- Vithula S - 3rd year, IT
- Shaun Allan - 3rd year, CSE

Dr. Dhannya SM , Assistant Professor, CSE

Think-A-Thon – A Pre-Event of CodHer'25

My Experience at Think-A-Thon – A Pre-Event of CodHer'25

I am Tushyent N.P, a first-year B.E-CSE student, and I'm happy to share my experience on securing **1st place** in **Think-A-Thon**, a pre-event of **CodHer'25**, conducted by the **ACM Student Chapter of CEG**. **CodHer** is a **national-level hackathon** aimed at encouraging **women in tech**. The

Think-A-Thon event featured two rounds that tested both **technical creativity** and **design skills**.

Round 1: Tech-Themed Skribbl.io Challenge

A **tech-themed Skribbl.io** game where participants had to **guess and illustrate technology-related terms**. This round tested **quick thinking and creativity**, and I secured **2nd place**.

Round 2: Poster Design Challenge

In the second round, I designed a **poster on "Gaming for a Cause"** using **Canva**. The competition focused on **creativity, clarity, and audience engagement**, and



with **46% of the votes**, I secured **1st place**.

This event was a great opportunity for me to combine **technical knowledge with creativity** in a competitive environment. I'm thankful to the **ACM Student Chapter of CEG**, **MotorQ**, **Unstop**, **College of Engineering, Guindy** for organizing this event. I also extend my heartfelt gratitude to **SSN College of Engineering** for constantly encouraging students to explore opportunities beyond academics. Thanks to everyone who supported me throughout this journey!

Tushyent N.P



My Experience at the Citi Bridge Program

Date: March 3rd to 7th, 2025

The Citi Bridge Program was an incredibly enriching and insightful experience that provided me with a deep understanding of both frontend and backend technologies, along with a glimpse into the corporate world. The 5-day program was structured thoughtfully, combining intensive learning sessions, engaging activities, and a hands-on hackathon to apply our skills in real time.

The first three days were dedicated to technical learning. We were introduced to a wide range of tech stacks used in the industry, including those relevant to both frontend and backend development. The sessions were well-organized and focused on practical implementation, which helped solidify our understanding of each component. We explored topics such as web development frameworks, APIs, database integration, and deployment techniques, all of which were taught in a clear and comprehensive manner.



The fourth day began with an energetic and fun Zumba session that helped us refresh and re-energize ourselves after three intense days of learning. This was followed by an inspiring series of talks by three experienced professionals from Citi. Each speaker shared their journey, insights into the corporate work environment, and valuable tips on career growth, work ethics, and adapting to the fast-paced tech industry. Their stories were not only motivating but also gave us a real-world perspective on what to expect after stepping into a

corporate job.

The highlight of the program was the fifth day, which featured a hackathon. Our challenge was to design an AI-powered solution for CIBIL Score Calculation. I was part of a dynamic team of five members, and together, we brainstormed, designed, and implemented our solution. It was a fantastic opportunity to collaborate, apply the skills we had learned during the program, and experience the excitement and pressure of a real-time problem-solving scenario. We focused on leveraging machine learning models to analyze credit





history and predict creditworthiness in a reliable and scalable manner.

Overall, the Citi Bridge Program was an eye-opener. It not only helped me upskill technically but also gave me a broader understanding of teamwork, corporate culture, and innovation in the real world. The hands-on learning approach, coupled with the opportunity to interact with industry professionals, made this program a memorable and invaluable experience in my learning journey.

A Journey that means so much more - My 4 years with the SSN ACM Student Chapter



Four years ago I stepped into SSN having aspirations of being proactive in student clubs and wanting to contribute to student run initiatives. Among the many opportunities that I had, to enrol as a volunteer in, was the SSN ACM Student Chapter. When I joined this society in my first year, it completely transformed my perspective on college life, allowing me to learn and grow immensely. The journey is very special, transitioning across different roles, starting from a member of the Editorial team to heading the PR and Community Outreach domain last year to becoming Chairperson this year, it is indeed a truly heartwarming experience. The "seniors" were incredibly supportive and years down the lane, I'm glad to say they are not just seniors but have now become good friends of mine with whom I'll always cherish memories.

I couldn't have asked for a better guide than our faculty coordinator Dr.N.Sujaudeen to whom I'll always be thankful to, for being the most supportive source of strength for all my endeavours. I would also like to thank Dr. Chitra Babu whose brainchild this student chapter is and wish that I've done justice to her visions for SSN ACM; and also to our Head of the Department Dr. T. T. Mirnalinee Ma'am for her support throughout the years.

Transitioning from learning from seniors to now mentoring juniors is a humbling experience. As Chairperson, I aimed to make significant changes to enhance the club's functioning this year, having a vision to make this student chapter an extremely vibrant one in SSN. And now at the end of the academic year with a record 10+ events conducted this year, ranging across technical contests to fun filled events like the Squid Game and Treasure Hunt, we did our best to make hours of learning into something fun and joyful. The success of any event, I believe, is not based on the numbers who turned up, it is truly successful when we hear genuine feedback from our peers who come up to say how

much they liked it and were eager for more, and I was fortunate to hear such feedback from our juniors many a times, which led to us to planning most of our events based on the interests of students.

The beauty of being a part of a society like ACM which has its wings spread out across the country and the globe is that we get to learn from so many people whom we can network with. I had the



opportunity to attend the ACM Annual Summit that was held in Bangalore in December 2024, that gave me the exposure on how much students and our department too can gain from the initiatives of ACM India and how much there is for us to grow and expand as a Student Chapter.

I've always said that I want our ACM Student Chapter to be a place which stands out, where everyone benefits from our initiatives, finding it both interesting and fun. With the support of an amazing team

that we had, I would like to believe that we did some justice to that vision; and now as I pass over the baton to my juniors, I am confident and hopeful that there are only better days to follow.

- Sanjjit S, Chairperson SSN ACM, IV Year

ADIOS '25 – A Heartfelt Farewell

The third-year students of the 2022–26 batch organized a memorable farewell event, ADIOS '25, for the outgoing 2021–25 batch on April 7th, from 1:00 PM to 5:30 PM. The event began with a formal session graced by our Head of the Department, Dr. T.T. Mirnalinee, faculty members, and students from both the third and fourth years. Hosted by Samah Syed and Mugil Krishna from the third year, the session opened with a heartfelt address by Dr. Mirnalinee, followed by warm wishes and cherished memories shared by the faculty.

Seniors then took the stage to express their gratitude and reflect on their four-year journey, acknowledging the department's role in shaping their personal and professional growth. As a gesture of appreciation, a group of seniors were awarded certificates recognizing their valuable contributions through participation in hackathons, conferences, and by actively organizing departmental club events.



The informal session, hosted by Vijay Srinivas K, brought fun and liveliness to the afternoon. A soulful musical performance by Rohan R, Srinidhi, Abhishek R, Neeharika, Lavanya Vasudevan, and Chandravel Saravanan set the mood. This was followed by the much-enjoyed Akadummy Awards — a

humorous award ceremony with 15 fun titles voted by the seniors themselves, conducted by Ananth Narayanan P, Abbhinav Elliah, Vijay Srinivas K, and Chandravel Saravanan.

A lively game segment, Family Feud, organized by Deepak Chandar, Dharunika S, and Aruna Devi, and hosted by Adithya Jyotsula, featured friendly competition between A and B section seniors in a format inspired by the classic game show.

Later, the seniors were guided to the CSE Seminar Hall for a surprise segment organized by Karthikaraja Chandrasekhar. The hall was decorated with pictures from their college years, followed by a nostalgic video montage created by Thirumurugan R. The event concluded with a warm cake-cutting ceremony.

The seniors were deeply touched by the thoughtful efforts and expressed how special and unforgettable the day felt. Laughter, emotions, and shared memories made the event truly heartwarming.

The entire event was student-funded and organized by over 30 third-year students, with support from a few second years. It was a heartfelt send-off and a valuable experience for everyone involved.

- Chandravel Saravanan, III year

Best Outgoing Student

I, **Sathvika V S**, a final-year student of the **Computer Science and Engineering** department at SSN College of Engineering, am immensely honored and humbled to have been awarded the **Best Outgoing Student for the Batch of 2021–2025**, **Best Outgoing Student for the department of computer science and engineering** as well as the **Best Outstanding Sports Person Award** during the **29th College Day Celebrations**.

Four years ago, I entered SSN with hope in my heart but uncertainty in my mind. Coming from a **Bio-Maths background**, I had no prior exposure to computer science and no network or connections in this new environment. The transition was daunting, and the fear of the unknown was very real. But today, as I look back, I take immense pride in knowing that I did not just overcome those initial doubts—I evolved, grew, and thrived.

This journey has been one of constant learning, self-discovery, and perseverance. The unwavering support and encouragement from the faculty at SSN played a pivotal role in helping me explore my full potential. Whether it was excelling in



academics, participating in hackathons and technical projects, or contributing in the field of sports, I was consistently motivated and guided to push beyond my comfort zone. Balancing academics with sports has been a challenging yet enriching experience. It taught me time management, discipline, and resilience—qualities that I will carry forward beyond my college years.

I am deeply grateful to all those who have been a part of my journey. I extend my heartfelt thanks to my **parents** for their constant encouragement and belief in me; to **Ms. Kala Vijayakumar**, President of SSN Institutions; to **Dr. Radha**, Principal of SSN College of Engineering; and to **Dr. T. T. Mirnalinee**, Head of the Department of CSE, **Dr. P. Balaji** Head of the Department of Sports, for their inspiring leadership and support. I am also thankful to all the **faculty members of SSN**, whose mentorship has been instrumental in my growth, and to my **friends**, whose presence and encouragement kept me going through every phase of this journey. I would especially like to thank **Dr. Rajalakshmi** and **Dr. Angel Deborah**, who have supported and motivated me from my very first year, playing a crucial role in helping me achieve this milestone.

SSN has been more than just an institution—it has been a space that nurtured my aspirations, challenged my limits, and shaped my identity.

Sathvika V S

CAT Results

Student Name	Overall Percentile
S. Rohith Ram	99.74
Anza Prem	82.20

PLACEMENTS

Student Name	UG/PG	Company
Harini M	UG	GrowFin
Meenakshi A	UG	Hashedin by Deloitte
Roshni Badrinath	UG	Launched
Boojesh Kanna P	PG	SPI Aviation Support Services Pvt Ltd
Mohanapriya E	PG	Ford business solutions
Sri RamaKrishnanJ	PG	Meenakshi Sundararajan Engineering College, Chennai

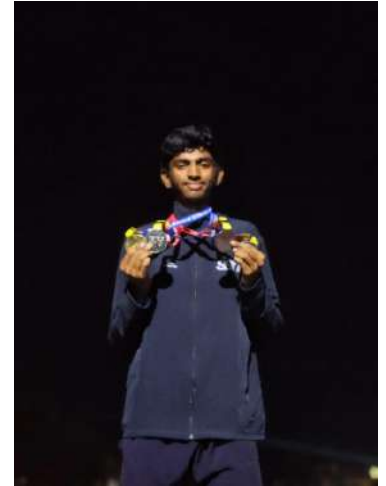
SPORTS

Pranesh KP, second-year CSE student, participated in the SVCE TROPHY 25 organized by SVCE,

Sriperumpudur at the intra-collegiate level and secured Fourth prize along with a cash prize of INR 1500.

Pranesh KP, second-year CSE student, participated in the REVELS CUP ATHLETICS organized by Manipal University, Mangalore, at the intra-collegiate national level and secured multiple prizes along with a cash prize of INR 2000.

- 400m Hurdles – Silver
- High Jump – Gold
- 4x400m Mixed Relay – Silver
- 4x400m Men's Relay – Bronze



ALUMNI ACTIVITY

- **Mr. R. Aravind**, UG Alumni 2004, visited the campus for UG Project Review as the industry expert on 22.02.2025
- **Mr. Pradeep**, UG Alumni 2023, visited the campus for UG Project Review as the industry expert on 22.02.2025
- **Mr. P. Vignesh**, UG Alumni 2015, visited the campus for UG Project Review as the industry expert on 22.02.2025
- **Dr. Subalalitha**, Professor, SRM Institute of Science and Technology, Chennai, PG-2004-2006 batch. She is a Founder & Director of First Language Technologies Pvt Ltd. She visited the campus to deliver the talk on “Introduction to RAG and LLMs, RAG tools and Frameworks and applications of RAG” during 9th edition of this sequel NLP workshop TIER 2025 on Feb. 12, 2025.
- **Mr. Seshan R**(Alumni, Batch 2011-2015), Senior Lead Engineer, Qualcomm, delivered a Guest Lecture on "Silicon to Shipment" on 28th March 2025 to the first year CSE students.
- **Mr. D. Thiageshwaran**, UG Alumni 2015, visited the campus for Encender 2.0 on 08.03.2025.
- **Mr. Vignesh Selvaraj**, UG Alumni 2015, visited the campus for Encender 2.0 on 08.03.2025.
- **Mr. Shanmuga Sundaram**, Founder of Revitalize Lifenow.com (2002 batch, USA), visited the department on 14th March 2025 during the Instincts 2025 event.
- **Mr. Aravind S Babu**, Senior Architect at Trellox, Bangalore (2009 batch, India), visited the department on 27th March 2025 as part of the General / Faculty Interaction.
- **Dr. Prakash P** (PG CSE: 2005-2007 Batch), Associate Professor, VIT Chennai served as external examiner for UG- BE(CSE) final year project viva-voce



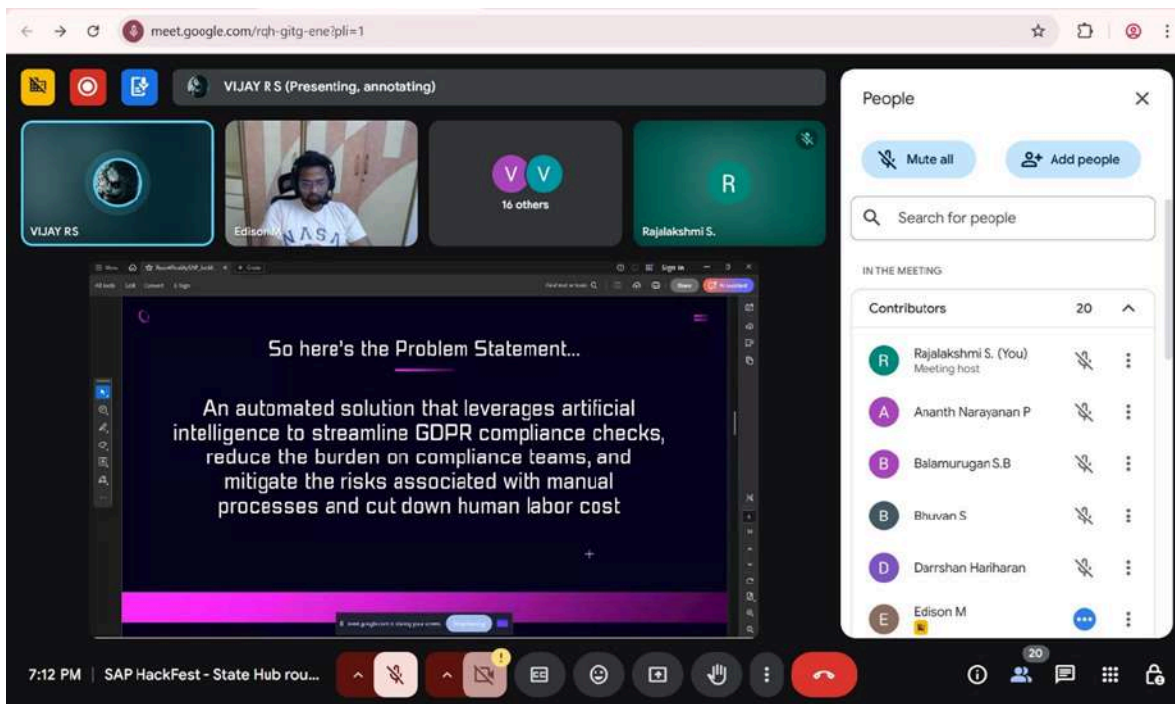
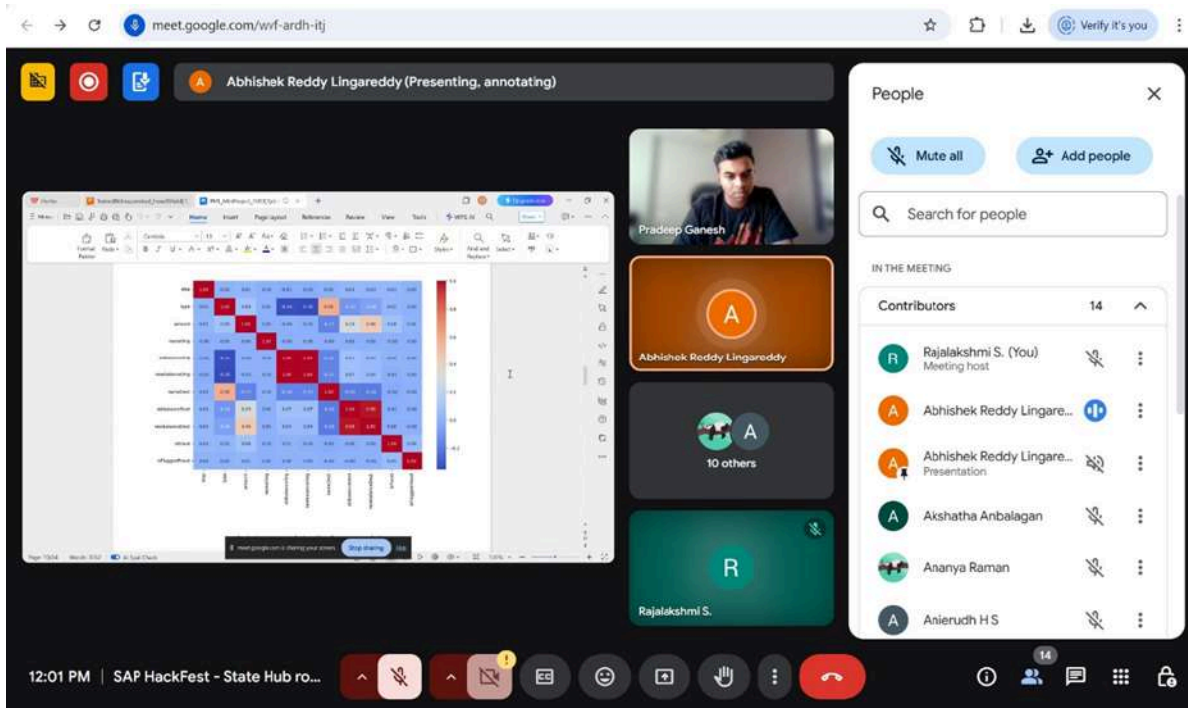
- **Dr. C. N. Subalalitha** (PG CSE: 2004-2006 Batch), Professor, SRMIST, Chennai, served as external examiner for PG- ME(CSE) final year project viva-voce



- **Board of studies meeting** was conducted on 26th April 2025 for R2024 UG (BE-CSE) and R2025 PG (ME-CSE). The following alumni students are invited to attend the meeting:
 - **Arvind Muthuraman**, Batch: 2012-2016, Dept. of CSE, Associate Director, Application Development, Presidio
 - **Pradeep G**, Batch: 2019-2023, Dept. of CSE, Software Engineer, Informatica
 - **Aarthi Ravishankar**, Batch: 2000-2004, Delivery Manager, Corporate Social Responsibility – Education and Skilling, Tata Consultancy Services, Siruseri, Tamil Nadu
 - **Sriram K**, Batch: 2014-16 (PG), Senior Manager, HDFC Bank (Back office)



- An online mentoring session was conducted by Dr. S. Rajalakshmi and Dr.J.Suresh on April 27 and 28, 2025, to support the 10 selected teams for the SAP Hackfest. **Mr. G. Pradeep** (2019-2023 Batch), Software Engineer at Informatica, Chennai, and **Mr. Edison**, Software Engineer at Google, Bangalore, interacted with the students. Eight teams presented their ideas and received valuable feedback and guidance from the industry experts.



NOTABLE VISITORS

- **Dr. Magesh Chandramouli**, Professor, Computer Graphics Technology, Fellow, Software Sustainability Institute, UK Purdue University NW, USA, visited the Department as the Chief Guest and keynote speaker for the International Conference ICCIDS 2025 on 13th February 2025.
- **Dr. Şenol Pişkin** Assistant Professor, Department of Mechanical Engineering, Faculty of Engineering and Natural Sciences, İstinye University, Istanbul, Turkey, visited the department to deliver a keynote talk on “Harnessing Artificial Intelligence for Advancing Healthcare: From Computational Simulations to Digital Twin” on 14th February 2025.
- **Ms. Lijimol George**, Senior Data Scientist, DADO DEWA – IoT DE, TCS - Chennai evaluated the final year project work as an industry expert on Feb. 22, 2025.
- **Mr. Senthilkumar Vaidyanathan**, Bungeetech, Chennai, visited the department as the Session Chair for ICCIDS 2025 on 13th February 2025
- **Mr. Rengasamy Ramanujam**, Google visited the department as the Session Chair for ICCIDS 2025 on 13th February 2025
- **Mrs. Vinita Jacob**, Verizon, Chennai, visited the department as the Session Chair for ICCIDS 2025 on 13th February 2025
- **Mr. Elango K**, Altimetrik India Private Ltd., Chennai visited the department as the Session Chair for ICCIDS 2025 on 13th February 2025
- **Mrs. Kirthika Sivaraj**, Wells Fargo, Chennai visited the department as the Session Chair for ICCIDS 2025 on 14th February 2025
- **Mr. Radhaswamy P**, TCS, Chennai visited the department as the Session Chair for ICCIDS 2025 on 14th February 2025
- **Dr. Senthilvelan**, CMRIT, Bengaluru, visited the department as the Session Chair for ICCIDS 2025 on 14th February 2025
- **Ms. Varsha Karunakaran**, Head Analytics, Hansa Research, Chennai as an industry expert reviewed P.G projects on 22-2-2025.
- **Mr. Selvaraj Shanmugam**, Senior Vice President of AI & Generative AI at Exela Technologies, Chennai, visited the department as the Chief Guest for the official inauguration of the AI Student Chapter at the CSE Seminar Hall on 7th March, 2025.
- **Mr. K. Sabarirajan**, Senior Machine Learning Engineer, Ford Motors Company visited the department on 8 March 2025 to deliver an expert talk on "Agentic RAG".
- **Mr. Vignesh Selvaraj**, Founder of Wrexia Technologies LLC, Casper, Wyoming, USA & Founder, Gen Z Real Estate (OPC) Private Limited, India, Mr. Naveen Madhan, CTO, Wrexia Technologies LLC, Casper, Wyoming, USA and Mr. D. Thiageshwaran, Senior Technical Architect, Hippo Video, Chennai, visited the department to evaluate the projects for "ENCENDER 2.0 - A Project Expo" on March 8, 2025
- Two industry experts from, Nokia , **Mr. Krishna Moorthy M and Ramireddy Vinay Reddy** visited the department to deliver a Hands-on Workshop on Kubernetes on 21st March, 2025
- **Dr. R. Vijayarajeswaran**, Managing Director, VI Micro systems visited the department on 26th March, 2025 to deliver a guest lecture titled "Role of IoT in sustainable Development"

TECHNICAL ARTICLES

Google's Ironwood TPU: A First-Principles Look at AI Hardware Innovation

Google's Ironwood Tensor Processing Unit (TPU) is a custom-built chip designed to accelerate artificial intelligence (AI) and machine learning (ML) workloads. Instead of relying on general-purpose CPUs or even GPUs, Ironwood is optimized to perform tensor operations (basically the math behind deep learning here) both faster and more efficiently.

What Are TPUs?

TPUs are application-specific integrated circuits (ASICs). Where CPUs juggle a wide range of tasks and GPUs handle parallel processing, TPUs are focused on matrix multiplications and convolutions. Ironwood is the latest TPU in Google's evolving architecture, succeeding TPU v4.

The First Principles Behind Ironwood

1. Computation Efficiency:

Neural networks mostly use matrix operations: think of large grids of numbers being multiplied and added. These are known as tensor operations. Ironwood speeds this up by having a massive number of multiply-accumulate units (MXUs) that work in parallel.

2. Memory Bandwidth

Data movement is a bottleneck. Ironwood solves this with high-bandwidth memory and tightly coupled interconnects. The memory is located close to the computation units, reducing delays and power use.

3. Scalability

AI models are growing rapidly. Ironwood TPUs are designed to scale, with large racks of TPUs working together. This allows training massive models like PaLM or Gemini without major architectural rewrites.

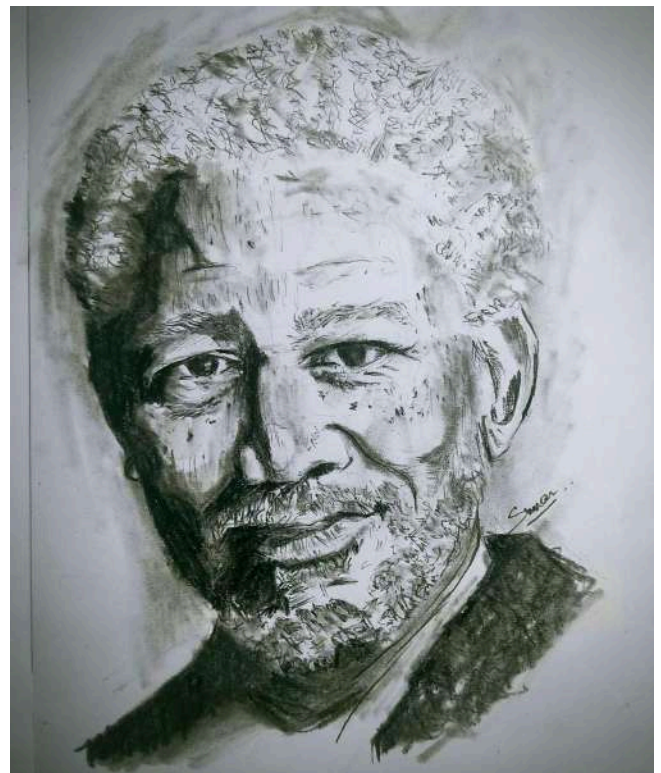
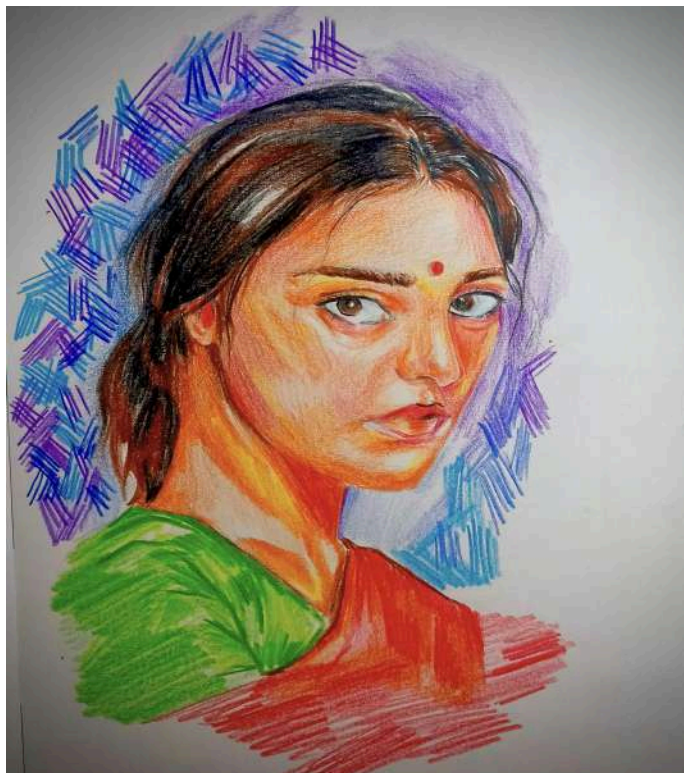
4. Energy Optimization

TPUs must be powerful but energy-efficient. Ironwood uses reduced precision formats like bfloat16 or int8 for faster, less power-hungry operations, without compromising accuracy. Lower bit-width means faster computation and lower energy cost.

Ironwood is significantly faster than its predecessors, particularly in training large language models (LLMs).

Samah Syed, III year

ART CORNER



Suman Raj V, 1st Year CSE

Department Vision, Mission, PEOs, POs and PSOs

Vision

To emerge as a world class technology department through education, innovation and collaborative research.

Mission

- To impart quality education to students.
- To create and disseminate knowledge for the betterment of mankind.
- To establish a center of excellence in collaboration with industries, research laboratories and other agencies to meet the changing needs of society.
- To provide individual attention and enable character building.
- To encourage entrepreneurship skills among students.

B.E. (Computer Science and Engineering) SSN Regulations 2024

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO1. Professional Success: Our graduates will excel in their career in industries associated with Computer Science and Engineering, or in research, or as entrepreneurs by applying their expertise in diverse domains.

PEO2. Adaptability: Our graduates will adapt to emerging technologies and develop new skills to remain competitive.

PEO3. Professionalism: Our graduates will maintain ethical and professional standards in their technical work keeping sustainable development of the society in view.

PROGRAM OUTCOMES (POs)

The graduates of the B.E degree program in Computer Science and Engineering will be able to

1. **Engineering Knowledge:** Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop the solution of complex engineering problems.
2. **Problem Analysis:** Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development. (WK1 to WK4)
3. **Design/Development of Solutions:** Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with

consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required. (WK5)

4. **Conduct Investigations of Complex Problems:** Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions. (WK8).
5. **Engineering Tool Usage:** Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations to solve complex engineering problems. (WK2 and WK6) P
6. **The Engineer and The World:** Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment. (WK1, WK5, and WK7).
7. **Ethics:** Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9)
8. **Individual and Collaborative Team work:** Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.
9. **Communication:** Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences
10. **Project Management and Finance:** Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.
11. **Life-Long Learning:** Recognize the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change. (WK8)

PROGRAM SPECIFIC OUTCOMES (PSOs)

The graduates of the B.E degree program in Computer Science and Engineering will be able to

PSO1: Solve computing problems by leveraging knowledge in foundational principles, distributed systems, security, artificial intelligence, machine learning and emerging technologies.

PSO2: Design and implement software and hardware systems using contemporary information processing technologies by applying software engineering principles and practices

5-year Integrated M.Tech (Computer Science and Engineering) Regulations 2023

Program Educational Objectives (PEOs)

PEO1: Industry career: To enable graduates to be competitive in the field of computer science and be well versed in cutting-edge technologies as well as tools used in the industry to take up a challenging career.

PEO2: Research Skills: To enable graduates to clearly formulate research problems and solve them effectively thus making them competent to pursue higher studies.

PEO3: Entrepreneurial skill: To enable graduates to work on inter-disciplinary projects, exhibit leadership qualities and initiate business ventures that provide innovative solutions for problems of social relevance.

Program Outcomes (POs)

The graduates of the 5-year integrated M. Tech degree program in Computer Science and Engineering will be able to

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems. (K3)
2. **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. (K6)
3. **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. (K6)
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. (K5)
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. (K6)
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.
7. **Environment and sustainability:** Understand the impact of professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.
9. **Individual and teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
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.
11. **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.
12. **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.

PROGRAM SPECIFIC OUTCOMES (PSOs)

1. Develop computational solutions to problems in diverse domains by applying principles and practices of computer science and Engineering (K3)
2. Conceptualize, construct and evaluate optimal solutions for practical problems by applying suitable computing techniques and tools. (K5)

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