MAR BASELIOS
COLLEGE OF ENGINEERING AND TECHNOLOGY
AUTONOMOUS

DEPARTMENT OF

COMPUTER SCIENCE AND ENGINEERING

Department Bulletin

VISION

To be a Centre of Excellence in Computer Science and Engineering providing quality education and research for the betterment of the society.

MISSION

To impart sound knowledge in theoretical and applied foundations of Computer Science and Engineering, and to train the students to solve real life issues to effectively define and shape life.

"BEST SOCIALLY RELEVANT AND STARTUP PROJECT" AWARD

Karthik Raj, **Stevin Santhosh Baby**, **Adarsh Udayakumar**, and **Gagan G Kurup** of Mar Baselios College of Engineering and Technology received the "**Best Socially Relevant and Startup Project**" award for their project on converting waste cooking oil into biodiesel with an embedded system at Hack Arti Thon, conducted in coordination with AISSPACE, Aluva, Ernakulam.

LENSMASTER'25

The CSI Student Branch of MBCET, in association with the Department of Computer Science and Engineering, conducted LensMaster'25, a festive photography competition celebrating the spirit of Christmas, throughout December 2025. The event witnessed enthusiastic participation from students across various institutes, who submitted their finest entries capturing the magic and joy of the Christmas season. The submissions were evaluated by a panel of judges.
The winners are as follows:
The Festive Luminary: **Aneya Alin (S1 CS)**
The Yuletide Finishers: **Himani S (S1 EC)** and **Ashwanth A. M. (S1 CS)**

NATIONAL BOOTCAMP ON IOT FORENSICS

The Centre for Development of Advanced Computing (C-DAC), under the Government of India, in collaboration with Mar Baselios College of Engineering and Technology (MBCET), Thiruvananthapuram, organized a five-day National Bootcamp on IoT Forensics from 8 to 12 December 2025. The programme was conducted with the support of the Information Security Education and Awareness Phase III (ISEA Phase III) project of the Ministry of Electronics and Information Technology (MeitY).

The sessions were delivered by experts from MeitY, Indian Computer Emergency Response Team (CERT-In), Kerala Police Cyberdome, Drone Forensics Lab, and Ai Drone Pvt. Ltd., providing participants with valuable insights into emerging challenges in digital and drone forensics. A total of thirty engineering students from seven institutions across the country participated in the programme.
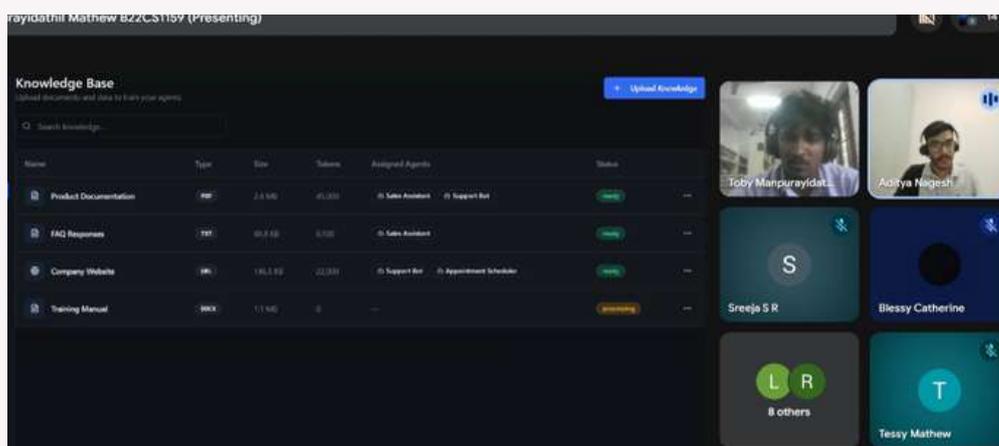
The bootcamp was inaugurated by Ms. Tulika Pandey, Scientist-G, MeitY, in the presence of **Rev. Fr. John Varghese Palanilkunathil**, Director, MBCET; **Rev. Dr. Koshy Issac Punnamoottil**, Bursar, MBCET; Dr. S. Viswanatha Rao, Principal, MBCET; **Dr. Jisha John**, Head of the Dept of CSE; Shri Vinukumar A. R., Scientist-G, C-DAC Thiruvananthapuram; Shri Hiron Bose, Scientist-E, C-DAC Thiruvananthapuram; and Ms. Amala R., Scientist-F, C-DAC Thiruvananthapuram. The valedictory session was addressed by Dr. Ch. A. S. Murthy, Director, C-DAC Kolkata.

Faculty Coordinators: **Dr. Tessy Mathew,** Professor, Dept of CSE, **Ms. GauriShree V. K.,** Asst.Professor, Dept of CSE.
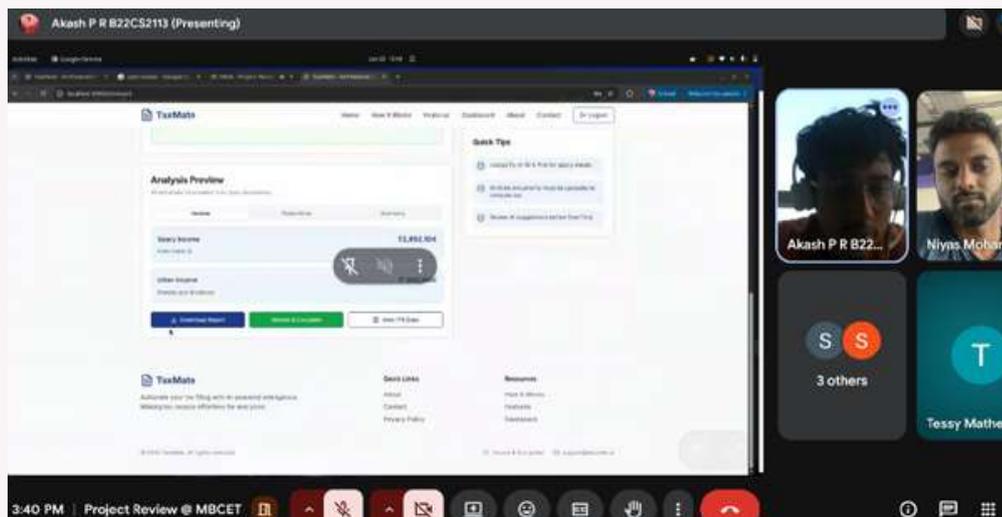
INDUSTRY EXPERT REVIEW OF BTECH AND MTECH PROJECTS

The M.Tech and B.Tech projects of the Department of Computer Science and Engineering were reviewed by industry experts, including distinguished alumni and professionals, who provided constructive feedback and valuable recommendations.

Mr. Arvind Panicker, Senior Engineer at Google (2018 pass-out batch); **Mr. Aditya Nagesh**, Software Engineer at Microsoft (2019 pass-out batch); **Mr. Sreedish P. S.**, former Software Engineer at Meta Platforms (2008 pass-out batch); and Mr. Niyas Mohammed, CEO & Co-Founder of NeuralCraft, reviewed the S8 student projects

In addition, **Mr. Jeril L., Systems** Engineer at Prophase (2019 M.Tech pass-out batch), reviewed the mini-projects in the domain of Cyber Security.

ALUMNI REUNION 2025

The Department of Computer Science and Engineering successfully organized the CSE Alumni Meet 2025 at the college campus on 27 December 2025 at 4:00 p.m. The event witnessed the enthusiastic participation of 120 alumni members from the 2002 to 2021 batches.

The programme commenced with an address by the Principal, Dr. S. Viswanatha Rao, who highlighted the significance of alumni engagement in fostering the academic and professional growth of the institution. The Director, Rev. Fr. John Varghese, felicitated the alumni and appreciated their continued association with the department.

A particularly emotional highlight of the event was the felicitation of the former Principals, whose visionary leadership, guidance, and unwavering commitment laid the foundation for numerous success stories. Their presence served as a reminder of the values, discipline, and inspiration that continue to define the institution. The occasion was further enriched by the presence of several former faculty members, whose participation rekindled cherished bonds between teachers and students. Reuniting with their mentors brought back fond memories of classrooms, lessons beyond textbooks, encouragement during challenging times, and the care that shaped generations of learners.

The Alumni Meet 2025 was not merely a gathering but a celebration of shared journeys, enduring relationships, and the lasting spirit of the institution. As the evening concluded, alumni departed with smiles, nostalgic reflections, and a renewed sense of belonging, carrying with them the timeless bond with their alma mater.

Ms. Asha S. Associate Professor, Dept of CSE and **Mr. Shibu V. S**. Asst. Professor, Dept of CSE served as the coordinators of the event.

6-DAY FACULTY DEVELOPMENT PROGRAMME ON "TRANSFORMERS TO AGENTIC AI: BUILDING AND DEPLOYING GENERATIVE AI SOLUTIONS"

The Department of Computer Science and Engineering, Mar Baselios College of Engineering and Technology (MBCET), organized a six-day Faculty Development Programme (FDP) titled "Transformers to Agentic AI: Building and Deploying Generative AI Solutions" from 1 to 6 December 2025. The programme aimed to equip faculty members with a comprehensive understanding of contemporary AI paradigms, including classical machine learning, transformer architectures, generative models, and emerging agentic AI systems, while also providing practical training in the development and deployment of Generative AI applications. Participants from reputed institutions engaged in an enriched learning experience that effectively integrated theoretical foundations with hands-on practice across transformer models, generative systems, and foundational language models.

The programme commenced with an inaugural ceremony attended by the Principal, Dr. S. Viswanatha Rao; the Head of the Department, **Dr. Jisha John**; and faculty members from various institutions. Each technical session featured live demonstrations, practical exercises, and guided experimentation, strengthening both conceptual understanding and real-world application skills.

The sessions were delivered by distinguished resource persons from academia and industry, including Dr. Joe Cheri Ross, Dr. Brijesh Madhavan, Dr. Manu Madhavan, Dr. Shailesh S., Dr. D. Sumathi, Dr. Sowmya V., Dr. Premjith B., Dr. Jesna Mohan, Mr. Arundev Vamadevan, and Mr. Sai Jeevan Puchakayala. The FDP received highly positive feedback from participants, who appreciated the programme's focus on bridging theoretical insights with practical implementation.

The programme significantly enhanced participants' understanding of key areas such as classical machine learning, generative AI fundamentals, transformer-based processing of text and speech, foundational language models, retrieval-augmented generation frameworks, generative text, speech and image models, agentic AI systems, prompt engineering, and the development and hosting of GenAI applications. Participants commended the clarity, engagement, and expertise demonstrated by the resource persons throughout the sessions.

The programme was coordinated by **Dr. Tessy Mathew,** Professor, Dept of CSE and **Dr. Neena Raj N. R**. Asst. Professor, Dept of CSE.

INTRODUCTION TO CYBER FORENSICS BOOTCAMP

A three-day Introduction to Cyber Forensics Bootcamp was successfully conducted from 10 to 12 December at Mar Baselios College of Engineering and Technology. The programme was designed to provide participants with foundational knowledge and practical exposure to the rapidly evolving field of cyber forensics.

The bootcamp was led by experts from ALIBI, with Dr. Sunil and his team serving as the resource persons. The sessions covered essential topics such as cybercrimes, digital evidence handling, forensic tools, and investigation methodologies. Interactive discussions and live demonstrations further strengthened participants' understanding of real-world forensic applications.

The programme witnessed enthusiastic participation and active engagement throughout all three days. The event was coordinated by **Ms. Indu V.** and **Ms. Neethi Narayanan**, Asst. Professors, Dept of CSE

In addition to the technical sessions, a Capture the Flag (CTF) competition was organized to evaluate participants' practical knowledge and problem-solving skills in cyber forensics. The contest generated significant enthusiasm, and the winners were announced at the conclusion of the bootcamp, adding a competitive and motivating dimension to the overall learning experience.

ATTENDED THE ZONAL MEETING OF ASAP'S CSDCCP

Ms. Poorna B. R. and **Ms Prathibha S. Nair**, Asst. Professors, Dept. of CSE participated in the Zonal Meeting of ASAP's Centre for Skill Development Courses and Career Planning (CSDCCP) on 1st December 2025, held at Bishop Jerome Institute of Technology and Management, Kollam.

THREE-DAY ONLINE WORKSHOP ON "POWER BI"

The Department of Computer Science, in association with the Centre for Computational Intelligence and Cyber Security and the MERP Systems India Centre for Excellence, organized a three-day online workshop on "Power BI" from 10 to 12 December 2025.

The sessions were conducted by Ms. Aruna Roy and Ms. Avina Varghese, Software Applications Developers from the MERP Systems India Centre for Excellence. The workshop featured extensive hands-on training, enabling participants to gain practical experience in designing interactive dashboards, reports, and data visualizations using Power BI. The resource persons conducted real-time demonstrations, guiding participants in working with datasets, performing data transformations, and applying analytical techniques effectively.
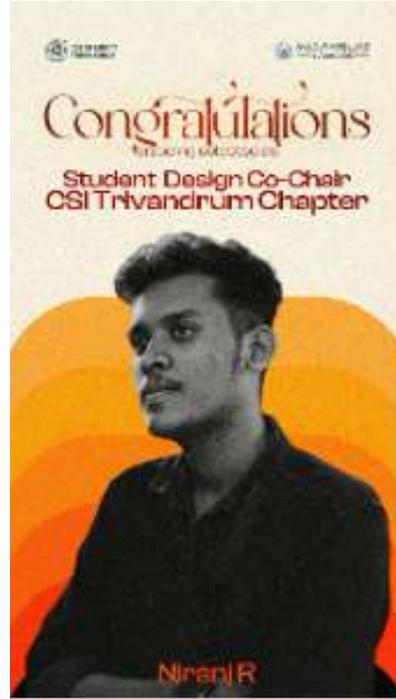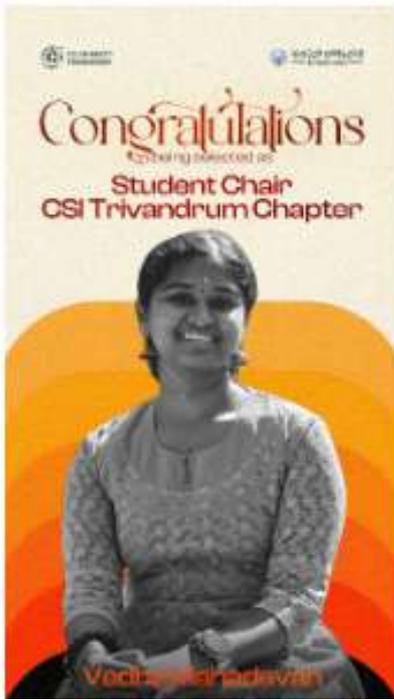
A total of 32 participants attended the workshop. The programme was coordinated by **Ms. Krishna L.**, Asst.Professor, Dept of CSE, Mar Baselios College of Engineering and Technology (MBCET).

ATTENDED DEVELOPER WORKSHOP ON FRUGAL AI

Adithya P from **S5 CS2** has successfully participated in the Developer Workshop on Frugal AI conducted as part of Supercomputing India 2025 on 10 December 2025 at Manipal Institute of Technology, Bengaluru Campus. The workshop featured expert-led sessions by Intel and the EkStep Foundation, covering High-Performance Computing, evolution of AI, deployment of multimodal and agentic AI systems, and the significance of voice-based AI for Indian languages, with practical insights into scalable, energy-efficient, and frugal AI architectures.

CSI TRIVANDRUM CHAPTER OFFICE BEARERS

Ms. Vedha Mahadevan (S6 CS2) has been selected as the Chairperson, and **Mr. Niranj R. (S6 CS2)** as the Co-Chair (Design), of the Computer Society of India - Trivandrum Chapter.

IEEE SENIOR MEMBERSHIP

Dr. Merlin George, Asst. Professor, Dept of CSE, has been elevated to the grade of Senior Member of the Institute of Electrical and Electronics Engineers (IEEE).

IEEE Senior Membership is a prestigious recognition conferred upon professionals who have demonstrated significant professional achievements and made notable contributions to the field of engineering and technology.

FDP ATTENDED

- **Ms. Gayathri K. S., Ms. Anjali S., Ms. Prathibha S. Nair,** and **Ms. Vijitha Robinson**, Asst Professors, Dept of CSE, successfully participated in and completed the AICTE Training and Learning (ATAL) Academy Faculty Development Programme on "Next-Gen Intelligence: HPC, Applied AI, and Data Science" conducted at Toc H Institute of Science and Technology from 8 to 13 December 2025.

- **Ms. Diana Mathew**, Asst. Professor, Dept of CSE, successfully presented the paper titled "XAI-Guided Gene Prioritization: A Boruta-XGBoost-SHAP Framework for Ovarian Cancer Biomarker Discovery" at the International Conference on Artificial Intelligence for Health Care (AIHC 2025), held from 10 to 12 December 2025 at National Institute of Technology Calicut.

- **Ms. Deepthi K. Moorthy**, Asst. Professor, Dept of CSE, attended an online Faculty Development Programme (FDP) on "Machine Learning Foundations" from 24 to 27 November 2025, hosted by Mohandas College of Engineering and Technology.

- **Ms. Lino Zachariah**, **Ms. Deepthi K. Moorthy, Ms. Krishna L., Ms. Neethi Narayanan, Ms. Vinitha V. K., Ms. Jayalekshmi J., Ms. Indu V**., Asst. Professors, Dept of CSE, participated in a six-day Faculty Development Programme on "Deep Learning for Text, Vision and Emerging Multimodal Systems", conducted by the Department of Electrical and Computer Engineering, Toc H Institute of Science and Technology, in collaboration with International Centre for Free and Open Source Software (ICFOSS), from 1 to 6 December 2025.

- **Ms. Anjali Devi A. J**., Asst. Professor, Dept of CSE, participated in a two-week International FDP on "Technology-Integrated Pathways to Achieve the Sustainable Development Goals (SDGs)", conducted in virtual mode and organized by Rajalakshmi Institute of Technology, from 17 to 29 November 2025.

- **Ms. Deepthi K. Moorthy**, Asst. Professor, Dept of CSE , also attended an online FDP on "Advances in LLMs" hosted by College of Engineering Muttathara from 15 to 19 December 2025.

- **Ms. Deepthi K. Moorthy, Ms. Lino Zachariah**, Asst. Professors, Dept of CSE, attended a Faculty Development Programme on "Deep Learning for Text, Vision and Emerging Multimodal Systems" organized by Toc H Institute of Science and Technology from 1 to 6 December 2025.

- **Ms. Anjali S., Ms. Prathibha S. Nair, Ms. Vinitha V. K., Ms. Jayalekshmi J.**, Asst Professors, Dept of CSE, participated in the five-day online Faculty Development Programme on "Next-Gen AI: From Deep Learning and Transformers to Responsible AI" conducted by Amal Jyothi College of Engineering from 24 to 28 November 2025.

PAPERS PRESENTED

- **Mr. Aadi Shankar Pillai, Mr. Rohit B. Nair, Ms. Nandana Dand,** and **Ms. Salin Shain (S8 CSE)** presented a paper titled "Digital Speech–Language Assessment App" at the 7th International Conference on Mobile Computing and Sustainable Informatics (ICMCSI-2026), held in Nepal, based on their final-year project work. The project was carried out under the guidance of **Ms. Deepthi K. Moorthy,** Asst. Professor, Dept of CSE, and **Dr. Sreedevi P.**, Asst. Professor, Dept of ECE.

- **Ms. Lino Zachariah**, Asst. Professor, Dept of CSE, presented a paper online titled "Real-Life Violence Detection in Sports Videos Using MoViNet" at the 9th International Conference on Micro-electronics and Telecommunication Engineering, organized by the Department of ECE, SRM Institute of Science and Technology, on 4 December 2025.

- **Ms. Asha S**., Associate Professor, Dept of CSE, presented a paper titled "AI Driven Environment Sustainability: Models, Tools, and SDG Acceleration Framework for Academic Institutions" at the National Seminar on AI as an Accelerator to SDGs: Pathways and Possibilities held on 17 January 2026 at Vidya Academy of Science and Technology.

- **Ms. Neethi Narayanan**, Asst Professor, Dept of CSE, participated in the International Conference on Multidisciplinary Perspectives in Advanced Computing and Technology (IMPACT 2026) held on 10–11 January 2026 and presented the paper "Entropy-Validated Post-Quantum Cryptography for Secure Key Management in Cloud Systems." The conference was organized by the Department of Information Technology, G. B. Pant University of Agriculture and Technology.

- **Aman Nair, John B. Varghese, Nikita Anna Ajith, R. Sidharth (2025 Batch)**, and **Ms. Anjali S**. (Asst Professor, Dept of CSE) presented a paper titled "Edufit - Career Catalyst: AI Powered Resume Analysis and Adaptive Learning for Career Development" at the IEEE International Conference on Smart and Intelligent Systems (SISCON 2025), held at Marian Engineering College on 20 December 2025.

FACULTY AS SESSION CHAIR

Dr. Neena Raj N. R., Asst Professor, Dept of CSE, served as a Session Chair at the IEEE International Conference on Smart and Intelligent Systems (SISCON 2025), organized by Marian Engineering College, Kazhakuttom, on 20 December 2025.

BOOK CHAPTER PUBLISHED

Mr. Kiran Biju (S7 CS1), Ms. Shreya Shelji (S7 CS1), and **Ms. Vijitha Robinson**, Asst. Professor, Dept of CSE, have authored a book chapter titled "Ensuring the Stability Between Sustainability and Economics Through Zero Hunger in the Digital Era." The chapter has been published in the recently released volume Economics of Sustainability: Theory, Practice and Future Trends (ISBN: 978-93-48314-71-0).

PAPER PUBLICATION

Mr. Melvin Joseph Siby, **Ms. T. S. Nandana, Ms. S. Gayathri, Mr. Nibil Mathew** (2021–2025 CSE Batch), along with **Ms. L. K. Dhanya,** Asst. Professor, Dept of CSE, presented a paper titled "Integrated Travel Recommendation System using Deep Learning" at the 11th International Conference on Smart Computing and Communications (ICSCC), held in Kochi from 3 to 5 July 2025. The paper was subsequently indexed in IEEE Xplore on 17 November 2025 (DOI: 10.1109/ICSCC66177.2025.11233707).

Ms. Dhanya L. K., Asst. Professor, Dept of CSE, in collaboration with Dr. Kannan Balakrishnan, Cochin University of Science and Technology (CUSAT), published a paper titled "Optimizing Hate Speech Detection in Malayalam-English Code-Mixed Text: Handling Women's Abuse by Synthetic Data Augmentation" in the Journal of Intelligent & Fuzzy Systems (SCI, Q2 category). The paper is available at DOI: 10.1177/1875896725138503.