Name of the Society:
IEEE Sudent Branch (STB)

Year of Formation:
2011

Coordinator:
Dr. Siddiq Iqbal, ETE

Objective:
To advance technology for the benefit of humanity by fostering innovation, learning, and collaboration among students across diverse engineering and technological domains.

Frequency of Meetings:
Two team meetings per month, and an Annual General Meeting involving all IEEE Student Branch members.

Social media link:

LinkedIn: https://www.linkedin.com/company/ieee-communications-society-bmsit

Instagram: https://www.instagram.com/bmsit_comsoc

Roles and Responsibilities:

We are a community passionate about exploring, sharing, and collaborating on cutting-edge topics in communications, including 5G/6G, Satellite Communication, Networking, Signal Processing, IoT, and AI. Members organize events, share knowledge, and develop innovative projects. We also connect BMSIT globally through the latest research, workshops, and conferences in communication technology.

Activities conducted:

Annual General Meeting 2025
Date: January 25, 2025
Location: BMSIT&M, Bengaluru

The Annual General Meeting (AGM) 2025 of the IEEE Student Branch, BMSIT&M, marked a successful transition of leadership and celebrated a year of impactful initiatives. The event recognized the contributions of the 2024 Executive Committee, introduced the 2025 team, and highlighted the achievements of various IEEE societies on campus. The AGM featured addresses by Tejas Mutalikdesai (Outgoing Chairperson), Vishwas Gowda (Treasurer), and reports from society heads showcasing workshops, hackathons, research projects, and outreach programs.

The newly elected committee was introduced:
- **Chairperson**: Reyyan Aleem Janbaz
- **Vice Chairpersons**: Spandana H & Nitish K S
- **Secretary**: Nupreeth Mandappa K V
- **Treasurer**: Shreyaa Kudremane
- **Projects Head**: Tarun Patil
- **Events Head**: Maxson Mathew

Dr. Saneesh Cleatus Thundiyil (Branch Counsellor) and Dr. Sanjay H A (Principal) addressed the gathering, commending IEEE's role in bridging academics with real-world tech innovation.

The AGM concluded with a vote of thanks and a networking lunch, setting the tone for another year of excellence, collaboration, and leadership.

Comp-SIF 2025 - Computing for Sustainability & Intelligent Future & IEEE Open Day

Date: March 21st & 22nd, 2025
Location: BMS Institute of Technology & Management, Bengaluru

About the Conference:
An IEEE student-branch-hosted international conference focusing on how computing-AI, green tech, smart systems, can drive sustainable development and intelligent infrastructure. The dual-format event spanned hands-on workshops, paper presentations, technical demos, and research discussions.

Key Highlights:
• Two-day event featuring expert talks and interactive technical stalls.
• Distinguished speakers such as Dr. Mikhail Nikolayevich Rychagov (MIET, Russia) on advanced antenna systems and Prof. Katsunori Takahashi (Japan) on microwave engineering

Hands-on Stall Highlights:
On March 21st, 2025, as part of CompSIF at BMSIT&M, the IEEE Student Technical Branch hosted an Open Day where all 11 IEEE societies came together to display their work. Each society set up interactive stalls showcasing hands-on projects, mini-games, technical demos, and engaging activities, giving students and visitors a chance to explore technology up close. It was a vibrant event fostering learning, collaboration, and innovation across disciplines under one roof.

Technical Sessions & Projects:
• Students and faculty presented numerous research papers including:
  o "Deep Learning based Alzheimer's Detection"
  o "DataShield: Advanced Cloud Security"
  o Studies on intrusion detection, solar MPPT controllers, AR-based agriculture solutions.

Outcomes & Takeaways:
• Exposure to sustainable computing, signal processing, photonics, and wireless communications
• Hands-on learning through live demos and workshops
• Enhanced knowledge exchange between students, faculty, and IEEE professionals
• Research spotlight for students on global platforms

Comp-SIF served as a vibrant nexus for sustainable computing innovation and emerging tech exploration, fostering a collaborative learning ecosystem at the intersection of academia, industry, and global research.

IEEE Summer of Projects (SOP) - 2025

Duration: May 31st, 2025 - June 21st, 2025
Location: BMS Institute of Technology & Management, Bengaluru

About the Event:
The IEEE Summer of Projects (SOP'25) was a four-week, hands-on robotics and IoT workshop designed to introduce students to real-world embedded systems, robotics, automation, and sensor-driven applications. Conducted across four consecutive Saturdays, the event featured a rich blend of technical sessions, guided project-building activities, expert lectures, and exciting competitions—making it one of the most engaging summer programs of the year.

Event Highlights:
- The IEEE Summer of Projects 2025 brought together students from multiple institutions across Bangalore, fostering a collaborative and innovation-driven learning environment.
- The workshop was inaugurated by **Shri Tejomurtula Mohana Rao**, Former Outstanding Scientist and Director, **DRDO–GTRE**, whose keynote address inspired participants through real-world insights, career experiences, and guidance for aspiring engineers.
- The event followed a progressive, hands-on structure, moving from fundamentals to advanced robotics applications across four days.
- Active involvement of mentors and volunteers ensured continuous technical guidance, debugging support, and practical learning.

Key Takeaways:
- Strong understanding of hardware–software integration in robotics systems.
- Hands-on exposure to mobile app development, wireless communication, and real-time robot control.
- Practical experience with sensors (IR, ultrasonic, IMU) and their real-world challenges such as noise, calibration, and alignment.
- Improved problem-solving, teamwork, and system-level thinking, especially while troubleshooting hardware inconsistencies and sensor errors.
- Confidence in building end-to-end robotic solutions—from sensing and control logic to user interfaces.

Technical Projects & Activities
- Mobile-Controlled Robot
  - Designed and developed custom mobile applications using MIT App Inventor.
  - Implemented wireless communication to control robot movement in real time.
 - Focused on UI design, event handling, and command transmission.

- Gesture-Controlled Robot
  - Integrated IMU sensors for motion and gesture detection.
  - Used ultrasonic sensors for distance sensing and obstacle awareness.
  - Demonstrated wireless data transfer and sensor-based decision making.
- IR Line-Following & Navigation Robot
  - Built a robot capable of navigating a predefined track using IR sensors.
  - Developed a companion mobile application to visualize sensor data and directional guidance.
  - Addressed real-world issues like sensor misalignment, noisy readings, and motor imbalance through iterative testing and calibration.

Overall Impact:

The IEEE Summer of Projects 2025 successfully combined theoretical understanding with practical execution, enabling participants to build complete robotic systems while gaining industry-relevant skills. The event served as a strong foundation for future work in robotics, embedded systems, and applied engineering innovation.
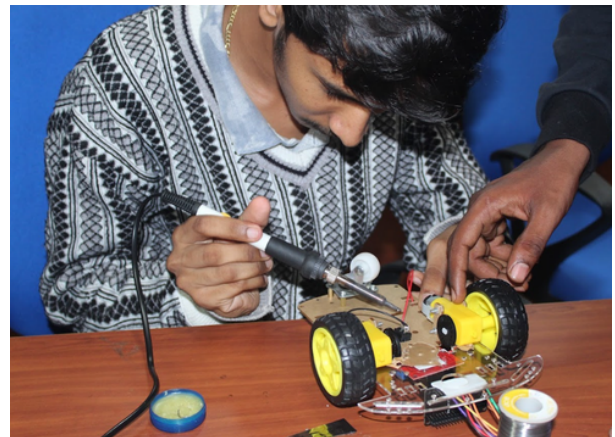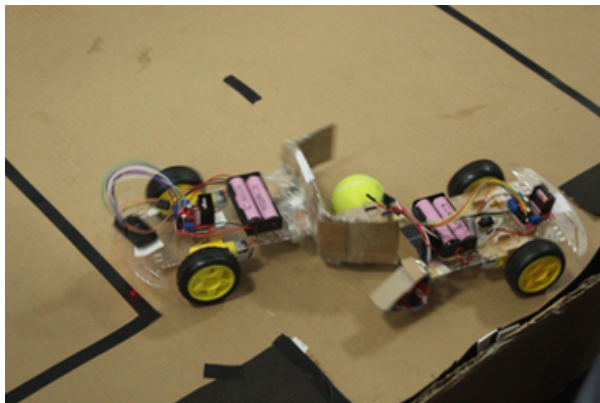
Reboot 2025 — Faculty Hackathon

Date: 22nd November, 2025

Location: BMS Institute of Technology & Management, Bengaluru

About the event:

Reboot 2025 is a large-scale faculty hackathon designed to empower educators through hands-on project development, innovation, and industry-aligned mentorship. The event witnessed over 300 teachers participating, forming 54 teams, with each team comprising four members.

Event Overview

- Reboot 2025 was a large-scale faculty hackathon aimed at empowering educators through hands-on innovation, project development, and industry-aligned mentorship.
- The event saw participation from 300+ faculty members, forming 54 interdisciplinary teams, each consisting of four members.
- The hackathon followed a multi-stage evaluation model, ensuring both technical depth and presentation quality.

Hackathon Structure & Timeline

- Task 1: Initial project submission
- (GitHub repositories / circuit diagrams)
- Task 2: Presentation submission evaluated by industry mentors
- Mentor Interaction Day: 27 September 2025
- Final Pitch & Grand Finale: 22 November 2025

Final Pitch Day Highlights:

- The Final Pitch event commenced with an inauguration at 9:30 AM at BSN Auditorium.
- The Chief Guest was Lalithanand Moses, Vice President & Managing Director – Global Digital Workplace Solutions, Unisys.
- Round 1 Evaluations (10:30 AM – 1:30 PM):
  - All 54 teams demonstrated their working prototypes before panels of industry mentors.
- Based on technical merit, innovation, and real-world applicability, top 6 teams were shortlisted for the Grand Finale.
- Final Presentations (3:00 PM):
  - Conducted before an esteemed jury comprising experts from IBM, Harman, Samsung, Unisys, and SAP Labs.
- Winners were announced during the closing ceremony, marking the culmination of the hackathon.

Key Takeaways:

- Enabled faculty upskilling through hands-on project development and exposure to current industry practices.
- Strengthened understanding of end-to-end product development, from ideation to functional prototyping and pitching.
- Fostered collaboration across disciplines, encouraging knowledge sharing and teamwork.
- Provided direct industry interaction and mentorship, helping educators align academic projects with real-world requirements.
- Encouraged innovation in future-ready technologies relevant to teaching, research, and applied engineering.

Overall Impact:

Reboot 2025 successfully bridged the gap between academia and industry by creating a platform where educators could innovate, validate ideas, and gain valuable industry exposure. The event reinforced the importance of practice-driven learning and empowered faculty to drive innovation within their institutions.

Winter of Projects (WoP) 2025

Duration: 1st November, 2025- 5th December, 2025
Location: BMS Institute of Technology & Management, Bengaluru

About the event:
Winter of Projects (WoP) is an annual multi-society prototyping initiative that encourages interdisciplinary collaboration among students. In 2025, WoP scaled up to 36 teams (from 22 teams in 2024), underlining rapid growth and enthusiastic participation. Each IEEE society releases a set of domain-specific problem statements (PS), from which teams choose — via an auction-style selection — the problem they wish to solve. Over a month, juniors work under the mentorship of seniors, alumni, and ExeCom members to design, build, test and refine functional prototypes. The event includes structured review rounds and mini-workshops to support participants.

Unique Structure & Format
- Each IEEE society released domain-specific problem statements (PS) spanning diverse technical fields.
- Teams selected their preferred PS through an auction-style selection process, encouraging strategic decision-making and ownership.
- Over a one-month prototyping phase, junior students worked under the mentorship of seniors, alumni, and ExeCom members.
- The program included:
  - Structured review rounds
  - Mentorship-driven feedback
  - Mini-workshops to strengthen technical fundamentals and project execution.

Timeline
- 29/10/25: Problem Statement (PS) release by IEEE societies
- 09/11/25: PS selection by teams & presentation submissions
- 10/11/25 – 04/12/25: Mentorship and guided prototyping phase
- 29/11/25: Mid-term review and feedback rounds
- 05/12/25: Stark Expo — campus-wide public prototype exhibition & evaluation

Stark Expo — Culmination Event
- WoP concluded with Stark Expo, a public exhibition where all 36 teams showcased their working prototypes.
- Prototypes were evaluated and viewed by faculty members, students, industry guests, and IEEE representatives.
- The expo served as a platform to highlight innovation, technical depth, and real-world applicability of student projects.

Key Takeaways & Learning Outcomes

- Extensive hands-on experience with:
  - Sensors and embedded systems
  - IoT and communication protocols
  - Robotics and automation
  - Web and database integration
- Strengthened mentorship culture, with seniors actively guiding juniors through real engineering challenges.
- Promoted interdisciplinary collaboration and peer learning across departments.
- Enabled teams to develop portfolio-ready functional prototypes, beneficial for:
  - Hackathons and competitions
  - Internships and placements
  - Research and advanced projects
- Enhanced visibility of student innovation to faculty and industry stakeholders.

Overall Impact:

Winter of Projects 2025 successfully reinforced a project-driven engineering culture, bridging theory with practice and preparing students for real-world problem-solving and competitive technical environments. The initiative continues to grow as a flagship platform for innovation, collaboration, and applied learning within the IEEE student ecosystem.