ಬಿ.ಎಂ.ಎಸ್. ತಾಂತ್ರಿಕ ಮತ್ತು ವ್ಯವಸ್ಥಾಪನಾ ಮಹಾವಿದ್ಯಾಲಯ
BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT
(Autonomous Institution Under VTU)
Yelahanka, Bengaluru -560064

DEPARTMENT OF ELECTRONICS AND COMMUNICATION

WAVES

NEWSLETTER

Volume 12 | Issue 02
July 2025 - December 2025

DEPARTMENT VISION

Be a pioneer in providing quality education in electronics, communication, and allied engineering fields to serve as a valuable resource for industry and society.

DEPARTMENT MISSION

To nurture students with a strong foundation in theoretical and practical concepts through innovative pedagogy and industry interface.

To foster interdisciplinary research, entrepreneurship skills and instil professional ethics by providing experiential learning opportunities.

PROGRAMME EDUCATIONAL OBJECTIVES

Establish successful careers in electronics, communication, and allied engineering domains.

Pursue advanced studies and conduct research to devise innovative solutions, propelling technological advancements.

Demonstrate leadership, effective communication, and teamwork while upholding ethical practices through sustainable engineering solutions.

PROGRAM SPECIFIC OUTCOMES

Design and analyze digital and analog circuits using industry-standard Electronic Design Automation (EDA) tools, applying electronic fundamental principles for VLSI system implementation.

Design and develop communication and signal processing systems using fundamental principles of analog and digital communication, effectively utilizing analytical tools and techniques.

Integrate, debug, and deploy embedded hardware and software solutions for various real-time applications, demonstrating proficiency in programming, interfacing, and system-level design.

MESSAGE FROM
HEAD OF DEPARTMENT



The Department of Electronics and Communication Engineering is showing consistent improvement in its academic, research, and placement performance. It offers a range of innovatively designed programs like open courses and value-added courses whose curricula are constantly updated to meet the changing requirements of the industry and to meet the needs of major stakeholders. We believe that our students have been well accepted in their job profiles and have consistently exceeded the expectations of the corporate world. The Department of Electronics and Communication Engineering brings out its bi-annual newsletter "WAVES" every semester. The Department is releasing its Volume 12, Issue 02 covering faculty and students' achievements from July 2025 to December 2025 . I hope this will give motivation and encouragement for both students and faculty to excel further in their respective fields. I also congratulate the editorial team members for their efforts, hard work, and precise coverage of the information. I wish them all the best. ***Happy reading!***

Dr. Shobharani A
Professor and HoD

WAVES

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PUBLICATION OF RESEARCH PAPERS BY THE FACULTY MEMBERS

International Journal/ Conference/Magazine/ Book Chapters

1) Dr. Asha G Hagargund, published a paper titled "Enhancing Time-Sensitive Networking resilience through SDN-based automated failover process, in International Journal of Intelligent Networks, during September 2025, The details are Volume 6, Pages : 176-184,ISSN2666-6030 , https://doi.org/10.1016/j.ijin.2025.05.001. https://www.sciencedirect.com/science/article/pii/S2666603025000065

2) Prof Shilpa Heremat written a chapter " Collaborative Intelligence: Blending Human Insight with Machine Precision " in Book title: Navigating Human-Machine Collaboration in Smart Factories ,DOI: 10.4018/979-8-3373-2985-7

3) Dr. Asha K department of ECE, Successfully completed NPTEL-AICTE Faculty Development Program on "Python for Data Science" from July to Aug 2025 (4 weeks)

4) Dr.Vijayalakshmi G V department of ECE, Successfully completed NPTEL-AICTE Faculty Development Program on "Teaching and learning in general program (TALG)" from July to Aug 2025 (4 weeks)

5) Prof Shilpa Hiremath presented paper " compact Lake and environmental aquatic navigator for Eco friendly removal" in National Conference on Advanced Research in Applied Sciences (NCARAS-2025) On 8th and 9th August 2025, organized by MVJ Engineering college, Bangalore.

FACULTY FDP ATTENDED

1) Dr Thejaswini S, Dr Mamatha K R, Dr Shobharani A, Asha G H , Dr Deepa Reddy from BMSIT&M participated in one week Workshop on "Wireless Power Transfer: Concepts to Applications", organized by the Department of Electronics and Communication Engineering, Ramaiah Institute of Technology from 30th June to 4th July 2025.

2) Dr. Ambika R, Professor, Department of ECE has attended the ATAL FDP on "Cyber Security for Digital age protecting data and privacy" at Akshaya Institute of Technology, Tumkur from 21.07.2025 to 26.07.2025.

3) Dr Anitha M , Department of ECE has attended FDP on "Effective Teaching in Engineering Education" at SKIT, Bengaluru hosted by VTU From 24-07-2025 to 26-07-2025

4) Dr.Biswaranjan Barik and Dr.Raju Hajare attended five days BRIDGE-Conclave-2025 at CAMBRIDGE INSTITUTE OF TECHNOLOGY from 18/08/2025 to 22/08/2025

5) Prof. Pavan G Malghan of ECE attended an IEEE Quantum Lecture Series FDP program from 01-10-2025 to 5-10-2025 at HKBK engineering college, Bangalore.

6) Dr.Asha G Hagargund, attended two week faculty development Program on "Trainers Training For Developing Employability", from 3rd september 2025 to 12 september 2025 at BMSCE,Bangalore.

FACULTY ACHIVEMENTS

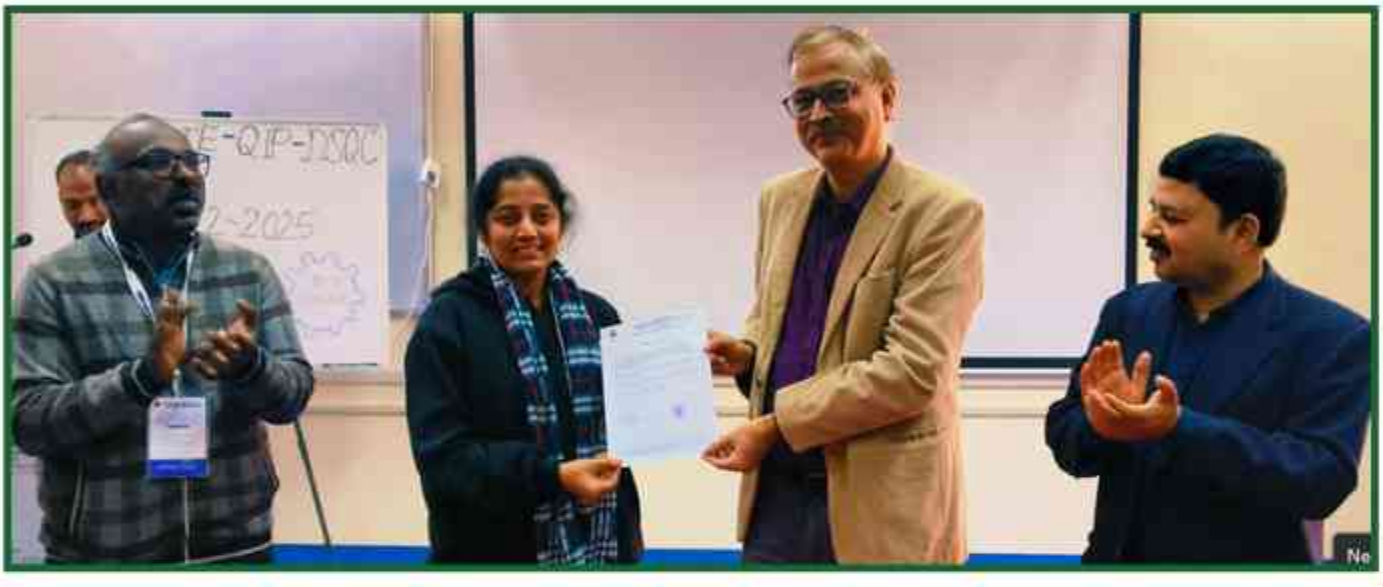


Dr. Anitha V. R. presented 6G project proposal to the Hon'ble Union Minister for Communications, Shri Jyotiraditya M. Scindia on5-7-2025 at VTU reginal office, Bangalore



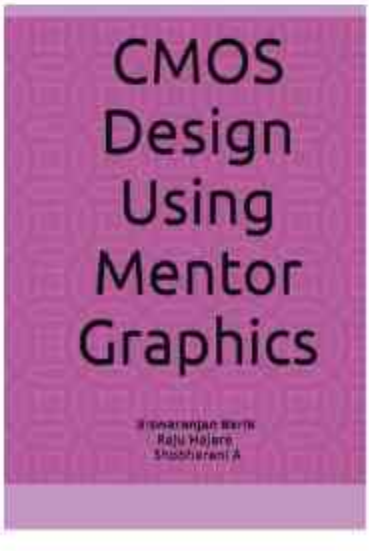
Dr. Soumya Vastrad successfully completed her Ph.D. Final Viva-Voce examination, and her Ph.D. degree was formally awarded during the 25th Annual Convocation of Visvesvaraya Technological University (VTU). The convocation ceremony was held on 04th July 2025 at Belagavi, Karnataka, marking a significant academic milestone in her scholarly journey.

Dr. Asha K, Assistant Professor from department of ECE has successfully completed AICTE QIP PG Certificate Programme in Data Science & Quantum Computing from June 2025 to December 2025 at IIIT, Gwalior Madhya Pradesh India.



Dr Biswaranjan Barik, Assistant Professor from department of ECE delivered a talk in the Five Day Faculty Development Program on "Artificial Intelligence Applications in ECE and EEE" was conducted by the Departments of ECE from 8.12.2025 to 12.12.2025 at Gonna Institute of Information Technology and Sciences , Andhra Pradesh

Dr Biswaranjan Barik, Dr Raju Hajare, Dr Shobharani A authored a Book titled "CMOS Design Using Mentor-Graphics" ISBN*979-8275323993 published by Amazon Kindle Publisher with link : https://a.co/d/1DnJ2X2







Dr. Shivarudraiah B, Assistant Professor, Department of ECE, has been conferred the Ph.D. degree at the 15th Annual Convocation of Jain (Deemed-to-be University) held on 19th November 2025. His doctoral research, titled "A Deep Learning Technique based study of Ionospheric Effects on Electromagnetic Wave Propagation on Navigation and Imaging Radar Missions," was completed under the supervision of Dr. Raju G, Professor, Faculty of Engineering & Technology (FET),



Mr.Shivarudraiah B, Assistant Professor, Department of ECE, defended his PhD thesis titled "A Deep Learning Technique based study of Ionospheric Effects on Electromagnetic Wave Propagation on Navigation and Imaging Radar Missions" on 30.08.2025 under the supervision of Dr. Raju G at Jain University global campus, Kanakapura-562112.

REBOOT 2025




















REBOOT
2025
Teachers Who Hack the Future
REBOOT 2025
Teachers Who Hack the Future
Sri. Lalithanand Mann
Sri. Aviram Sharma
PATRONS
REBOOT 25
Team Name :
Prize :
Rupees Sixty Thousand
₹60,000

MEMORANDUM OF UNDERSTANDING (MOU)



BMS Institute of Technology and Management (BMSIT&M) has officially signed a Memorandum of Understanding (MoU) with Bradley University, USA, marking a significant step towards international academic and cultural exchange on 14th July 2025 and Dr. Anitha V.R., Associate Professor, ECE Dept , was recognized for her instrumental role in facilitating this collaboration



"RF MEMS and their Applications in Biomedical, 5G and Above Communications, and Electronic Warfare Systems" The SAGE–BMSIT Symposium 2025 held on August 1st and 2nd August, 2025, at BMS Institute of Technology & Management (BMSIT&M),In Collaboration with Shastry Associates' Global Enterprises (SAGE), USA. Dr. Anitha V. R. of ECE dept served as the Convener of the event

SYNOPSYS EDA TRAINING PROGRAM





The Department of ECE, BMSIT&M, obtained the EDA tools from MeiTY-CDAC through C2S program. BMSIT&M, is one of the 390 institutions who have obtained this facility in India. In this regard a training program was scheduled on Synopsys EDA tool utilization for Digital IC design on 24.11.2025 to 26.12.2025 . M.Tech. VLSI System Design students, Faculty & Staff, Dept.of ECE department participated . Mr. Chetan Kumar N S, CTO & Lead Trainer, VLSI Minds was the resource person and Dr Bhanuprakash R was the Department coordinator for this training programme.

The first day of the workshop introduced participants to the foundational concepts of Digital IC Design and the ASIC design flow, followed by hands-on exposure to Synopsys Custom Compiler for schematic design and simulation. The second day focused on physical implementation using the Custom Compiler Layout Editor. Participants translated their schematics into mask-level layouts and learned to validate physical .correctness. The final day integrated all design stages into a complete workflow, from layout extraction to post-layout simulation. The session concluded with advanced sequential circuit design and a hands-on mini-project

SEMINARS / EXPERT TALKS



ECE dept conducted an expert talk on "Technology and Business Process Transformation" on 22nd September 2025. The session was delivered by Mr. Suresh Ambekar, Chief Enterprise Architect at Kyndryl Inc., USA. The event aimed to provide insights into how emerging technologies are revolutionizing modern business processes and driving digital transformation across industries.

INTER DEPT. SIH 2025



The Smart India Hackathon (SIH) 2025 was successfully conducted by the Department of Electronics and Communication Engineering on 18th and 19th September 2025. The two-day event witnessed enthusiastic participation from students across various teams. It provided a platform for students to apply their technical knowledge, demonstrate innovative ideas, and work collaboratively on assigned problem statements. Faculty members actively mentored the participants throughout the hackathon, guiding them in developing practical and feasible solutions. The event successfully promoted hands-on learning, teamwork, and problem-solving skills among the students.

STUDENTS WORKSHOP



The Departments of ETE and ECE successfully organized a one-day workshop on PCB Design for 5th semester students on 30th October 2025. The program featured an online, hands-on training session conducted by Altium Software, providing students with practical exposure to industry-standard PCB design tools and methodologies.

The workshop was coordinated by Dr. Soumyashree M. S (ETE) and Dr. Asha G. Hagargund (ECE), whose efforts ensured the smooth execution and academic value of the event.

THE HEALTHCARE INNOVATION HACKATHON





The Healthcare Innovation Hackathon was organized by the Department of ECE in association with IIC and BMESI, BMSIT&M on 14.11.2025 and 15.11.2025. The event took place at the ECE Labs, Sir MV Block, and was open to all 5th semester students. The event was coordinated by Dr. Vijayalakshmi G V & Dr. Mamatha K R.

STUDENT ACHIEVEMENTS

IEEE YESIST12



Team Spatika from BMSIT&M – Tarun Patil, Sri Srujan Hari T, Nitish K S, and Harshitha K V (ECE, 5th Semester) – were among the top 32 teams worldwide at the IEEE YESIST12 Grand Finale (Maker Fair Track) held on 23–24 August 2025 at Universiti Kebangsaan Malaysia(UKM), Malaysia. They presented their project "Smart Automated Feeding and Environmental Monitoring System for Sericulture" bringing pride to the institution on this international stage

Neo nexus 36.0 @ Ballari



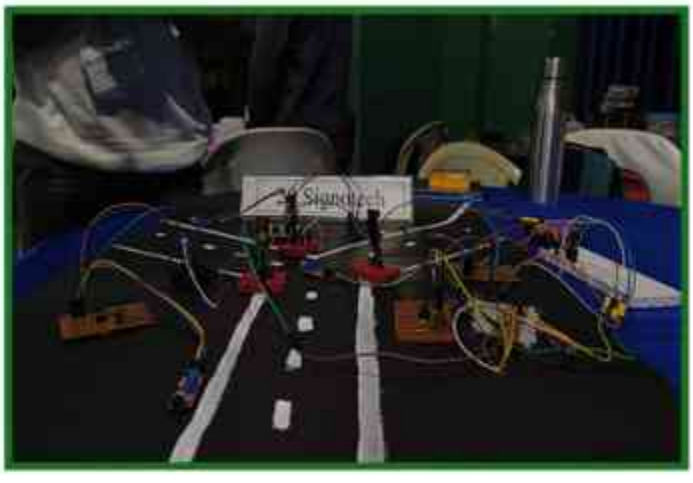
Srijan U ECE Dept , of team Garuda has secured 1st position in the top 10 best Performing Teams in Neo nexus 36.0 National level 36 hours hackathon at Ballari institute of technology on 06/09/25 -7/09/25



Student members (Team SPATIKA) Mr Tarun Patil, Sri Srujan Hari T, Mr Nitish k S and Ms Harshitha KV have won the 2nd runner up prize at the Neo Nexus 36.0 (National level Hackathon non-stop innovation challenge) at BITM Ballari on 6th and 7th September 2025 for the Project Title: "Predictive integrated system for detecting outdoor AQI, HTC and Acid Rain".

ELECTROTHON @ BNMIT





2nd Runners in the 12 hour Hardware Hackathon held at BNMIT on 29th August 2025 organised by IEEE PES. The project was an "Emergency vehicle detection system using Acoustic fingerprint system, to control traffic lights".

Team consisted of B Suraj ,Gurudatt N and P Achyuth from ECE Department.

DecodeX 2025



Winners of DecodeX held at BMSIT&M on 21st September 2025 organised by IEEE SPS. This was a 24 hour CTF (Capture The Flag) based event where the answers for the riddles were to be decoced.

Team consisted of B Suraj ,Gurudatt N, Rohit H N and P Achyuth from ECE Department.

India Mobile Congress 2025

BMSIT proudly showcased its innovative project SkyPulse in the field of communications at India Mobile Congress 2025, Asia's largest digital technology and telecommunications expo on 8th October to 11th October 2025.

One of the highlights was SkyPulse, developed by Nitish K.S. and Tarun Patil from 5th Sem ECE, under the mentorship of Dr. Anitha V.R, Faculty, Dept. of ECE.

SkyPulse is a climate intelligence system designed to redefine weather forecasting in Bengaluru through the seamless integration of IoT, 5G, and SatCom technologies — setting new standards in connected climate innovation



CODE RED 3.0

3rd semester students B Suraj, Gurudatt N, P Achyuth and Aryan R secured first place in the Hardware Track at Code Red 3.0, a 24-hour hackathon held on 13 December 2025 at BMS Institute of Technology and Management and organized by the E-Cell. Their project, MicroSLAM, is a low-power, real-time embedded SLAM system designed to estimate robot position and perform 360-degree environment scanning using minimal processing resources.





SEMILOGIC 2025 @ NITTE



3rd semester ECE students Gurudatt N, B Suraj, and P Achyuth secured 1st place at SEMILOGIC 2025, held on 31st October 2025 at Nitte Meenakshi Institute of Technology. They presented an Emergency Vehicle Detection System using acoustic fingerprinting, designed to identify approaching emergency vehicles and manipulate traffic signals to enable faster and safer passage.

Mediverse 2025



Winners of Mediverse held at BMSIT&M on 15th November,2025 organized by IEEE EMBS. This was also a 24 hour CTF (Capture The Flag) based event where the answers for the complex riddles were to be decoded. Team consisted of B.Suraj, Gurudatt.N, P.Achyuth and Aryan.R.

Winter Of Projects 2025



3rd semester ECE students Bhoomika V Kashyap, Bhoomika G B, Nishika R Reddy, and Lochan K secured 1st place in the hardware track at Winer of Projects held on 5th December at BMSIT&M.

Project was Driver fatigue detection system that alerts the driver based on steering grip and wheel movement.



3rd semester ECE students Hasini KV, S Kalanthika, S Pavitra, and Neha K secured 2nd place in the Hardware Track at Winter of Projects held on 5th December 2025.

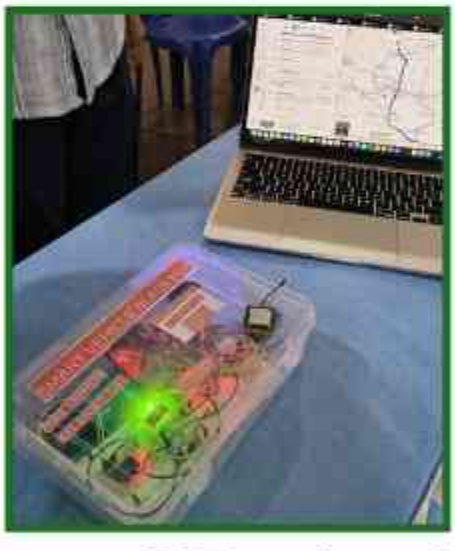
Their project, NoticeHub, is an IoT-based smart notice system that remotely updates a microcontroller-based digital display in real time, improving communication efficiency and reducing paper usage.

Winter Of Projects 2025



1st semester ECE students Aadya Chirayu Naik, D.V Aishwarya, Satvik S and Anish T.P secured 3rd place in the software track Winter of Projects held on 05/12/2025 at BMSIT&M.

Our project was to build a smart AI playlist software that generated playlist recommendations based on real time movement and emotional state. It was designed to track the physical motion of the person through fitness sensors inbuilt in mobile phones and a questionnaire that helped describe one's emotion and feeling to generate the desired playlist.





3rd semester ECE students Anupam Prusty, Jitamitra Sai, Anshul, and Ishan Jain secured 3rd place in the Hardware Track at Winter of Projects held on 5 December 2025 at BMS Institute of Technology and Management. Their project, Smart Vehicle Black Box, is an ESP32-based system that detects accidents in real time using GPS and IMU sensors and enables automatic emergency alerts for faster response

Winter Of Projects 2025





3rd Sem ECE students Vishruth N, Gurudatt N, Rohit H N, and P Achyuth secured 1st place in the Hardware Open Innovation Track at Winter of Projects held on 5th December 2025 at BMS Institute of Technology and Management with their project
ASTRA: Autonomous Satellite Tracking and Reception Antenna



5th-semester ECE students Vibha I S, Ashitha M, Raman R, and Akshaya Ramesh secured 1st Place in the Software Track (Open Innovation) at IEEE Winter of Projects held on December 5th, 2025.

Their project, "Autococoon: Vision integrated system for cocoon grading and quality characterisation," utilizes computer vision to automate cocoon grading. The system provides an objective, image-based evaluation of quality characteristics, significantly improving consistency in the pre-silk reeling assessment phase.



INTER COLLEGE PROJECT EXHIBITION @ ATME COLLEGE

Student members (Team SPATIKA) Mr Tarun Patil, Sri Srujan Hari T, Mr Nitish k S and Ms Harshitha KV have won the 2nd runner up prize at Inter college Project Exhibition at ATME college of Engineering hosted by CEDA, IEEE Bangalore section and Mysore subsection on 25-10- 2025 for the Project Title: "Smart Automated Feeding and Environmental Monitoring System for Sericulture " under the guidance of Dr Shobharani A.

Sustainathon Hackthon



Ujwal U , M.V.N.K Sai Tanmayee, Srilakshmi , Pranit secured 3rd place and a ₹10,000 prize at Sustainathon Hackthon for the project titled "Piezoelectric Energy Harvesting Prototype" in the conducted by Vidyavardhak Engineering college at Mysore on 20.11.2025.

ANVESHAN 24-HR MULTI-DOMAIN HACKATHON



Students of ECE Dept Kulajeet Barman, Kushagra Sinha, Ananya Gladys, Sayed Abdul Qadar (CSBS Dept) had cleared the idea pitching round of Anveshan 24 Hour Multi-Domain Hackathon held at CHRIST (Deemed to be University) Bangalore Kengeri Campus on 27th October and participated in the 24-Hour Hackathon at Acharya Institute of Technology held by the IEEE Bangalore Section SAC on 15.11.2026. The project is built on the concept of Healthcare IoT. An automated heart monitoring system that uses an AD8232 sensor to plot ECG signals which is transmitted to the cloud, where a custom-trained AI analyzes it and provides real-time results to the end user.



Tech Triad 2025

Students of ECE Dept Kulajeet Barman, Kushagra Sinha, Ananya Gladys, Sayed Abdul Qadar (CSBS Dept) secured 1st runner up in Tech Triad 2025 - International Ideathon held at Dayananda Sagar Academy of Technology and Management on 12.11.2025. The project is built on the concept of Healthcare IoT. An automated heart monitoring system that uses an AD8232 sensor to plot ECG signals which is transmitted to the cloud, where a custom-trained AI analyzes it and provides real-time results to the end user.

STATE-LEVEL INTERCOLLEGIATE IDEATHON



1st semester ECE Students Charishma and Chinmayee under the mentorship of Asha G Hagargund, participated as Team Cognivia and secured First Place at a State-Level Intercollegiate Ideathon held at East West Engineering College, Yelahanka on 15.11.2025 Title of the project was Predict. Alert. Protect Sensing environmental triggers in autism.

Tech Triad 2025



ADITYA.S, JOHAN ANIL, MEDHANSH MOHANRAM, SHIVANI ANAND students of ECE DEPT secured Runners upplace and a ₹10,000 prize at the IEEE Anveshan 24-Hour National Level Hackathon conducted on 15.11.2025 and 16.11.2025,at Acharya Institute of Technology, Bangalore for the project, titled "Tinlicker: Smarter Road, Smarter Lives".

BHUMI CAMPUS AWARDS 2025

EQCMS and SKYPULSE were recognised and honoured at the forum for driving meaningful social impact through innovation by Bhumi Campus Awards 2025 and awarded on 13.12.2025



EQCMS and Project SkyPulse are student-driven sustainability initiatives developed at BMS Institute of Technology and Management (BMSIT&M), Bengaluru, by a group of undergraduate students from the Electronics, Computer Science, and Telecommunication branches.

EQCMS was developed by Nitish K S, Tarun Patil, and Sri Srujan Hari T, under the mentorship of Dr. Rajesh Gopinath, Professor, Department of Civil Engineering, with support from the BMSIT&M Eco Club. Project SkyPulse was led under the IEEE Student Branch BMSIT&M, involving 25 student volunteers, in collaboration with Green Circle NGO, and guided by Dr. Anitha V R for institutional coordination and support.

Both initiatives focus on environmental monitoring, climate resilience, renewable energy integration, and data-driven sustainability. In recognition of their meaningful social impact through innovation, EQCMS and SkyPulse were honored at the Bhumi Campus Awards 2025, held in Chennai on 13 December 2025.

Edited and Compiled by:
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