

ETSA-Connect

Issue 7 | Vol 2

June 2025



Our Inspirations



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Founder President
Pimpri Chinchwad Education Trust



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ADVISOR'S MESSAGE

Prof. Kishor Kinage (HoD ENTC)
Managing Editor



Professional development is an essential but often neglected aspect of career growth. Professional development refers to the process of enhancing one's professional skills, knowledge, and competence in order to meet the demands and expectations of one's field. It involves the development of practical theories and the construction of a professional identity, as well as the ability to take on various professional roles and uphold the professional status of one's field.

Professional development is important because it has the potential to open opportunities for career advancement. Apart from technical knowledge, professional development means, Improving communication skills, taking on a leadership role and building a strong professional network to furthering your career.

For this purpose, we encourage our students to participate in ETSA-IETE-IEEE SPS activities. I wish all the best to Team ETSA-IETE-IEEE SPS for their future endeavours.

ADVISOR'S MESSAGE

Mrs. Ashwini Shinde

Managing Editor

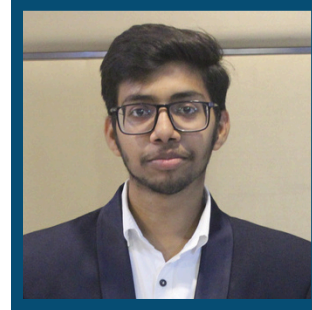


ETSA is the Electronics and Telecommunication Student Association , a platform created by the students for the students. Primary commitment of the ETSA is to provide responsible and equitable student leadership and to mirror the opinions and concerns of all segments of the department. All the events and activities organized attempts to motivate students in campus life and form a close-knit interdisciplinary, multinational student community at the E&TC Department. I wish all the best for Team ETSA for their bright future and dreams.

EDITOR'S MESSAGE



Harish Patil
Senior Editor



Vishveshwar Jadhav
Senior Editor

Welcome to ETSA Connect, the official magazine of the Electronics and Telecommunication Students' Association (ETSA) at PCCOE. This magazine serves as a vibrant chronicle of the events, seminars, and activities conducted under ETSA, the IEEE SPS PCCOE Student Chapter, and the IETE Students Forum PCCOE.

Through ETSA Connect, we aim to celebrate the achievements and creativity of our students and faculty while providing a platform for knowledge sharing and collaboration. The magazine showcases a rich collection of event highlights, technical articles, innovative projects, and inspiring success stories. It reflects the spirit of innovation, learning, and community that defines our association.

We hope this magazine ignites curiosity, inspires ideas, and fosters a sense of belonging among our readers. Happy reading!

PRESIDENT'S MESSAGE

Isha Despande

President, ETSA PCCOE



As the President of the Electronics and Telecommunication Students Association, I've embraced the opportunity to lead with purpose and passion. My mission is to empower members, fostering creativity and promoting innovative ideas. I have organized a range of events, from technical workshops on advanced topics like machine learning model deployment to non-technical celebrations such as Teacher's Day, as a token of love and appreciation. By inviting experienced industrialists for insightful sessions, I've ensured a balance that caters to diverse interests. I strive to uplift my peers, encouraging their growth and collaboration in all endeavors.

By leveraging social media and networking, I've built lasting connections that add immense value to our community. Every day, I learn something new, reinforcing the importance of adaptability and vision. Leadership is challenging yet rewarding, offering lessons in resilience and teamwork that shape not only our association but also my personal growth journey.

CHAIRPERSON'S MESSAGE

Rasika Wakte

Chair, IEEE SPS PCCOE



At the IEEE SPS Student chapter, we work to bring innovation, collaboration, and learning opportunities to students like us at PCCOE.

Over the past year, our chapter has worked hard to provide a platform for students to gain practical knowledge by coordinating various hands-on workshops, technical sessions and interactive events.

These efforts are aimed to bridge the gap between theoretical knowledge and practical applications for our fellow batchmates. Our achievements would not have been possible without the constant support and mentorship provided by our faculty members. Their efforts helped us overcome challenges and execute our ideas flawlessly. I would also like to extend my gratitude towards our team, for all the efforts and hardwork they have put up for the success of events conducted.

As we move forward, we remain focused on our goal, that is, to provide more learning opportunities for students to grow and with that make ourselves professionally sound. Finally, I would like to thank the Electronics and Telecommunication department for providing us with this wonderful opportunity.

TEAM ETSA

MEET THE TEAM

ETSA - ISF OFFICE BEARERS 2024-25



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Eshal Shaikh

TEAM IEEE SPS

<p>CHAIRPERSON</p> <p>RASIKA WAKTE RASIKA WAKTE RASIKA WAKTE RASIKA WAKTE RASIKA WAKTE RASIKA WAKTE RASIKA WAKTE RASIKA WAKTE RASIKA WAKTE RASIKA WAKTE</p> 	<p>CO-CHAIRPERSON</p> <p>RISHIKESH NIPUNGE RISHIKESH NIPUNGE RISHIKESH NIPUNGE RISHIKESH NIPUNGE RISHIKESH NIPUNGE RISHIKESH NIPUNGE RISHIKESH NIPUNGE RISHIKESH NIPUNGE RISHIKESH NIPUNGE RISHIKESH NIPUNGE</p> 	<p>SECRETARY</p> <p>JANHAVI DESHPANDE JANHAVI DESHPANDE JANHAVI DESHPANDE JANHAVI DESHPANDE JANHAVI DESHPANDE JANHAVI DESHPANDE JANHAVI DESHPANDE JANHAVI DESHPANDE JANHAVI DESHPANDE JANHAVI DESHPANDE</p> 
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EVENTS

SHIVKALARANG

Date : 19th Feb 2025

Mode of Conduction : Online

The Department of Electronics and Telecommunication (E&TC), Pimpri Chinchwad College of Engineering (PCCOE), in association with ETSA, ISF, and IEEE SPS, organized a creative and technology-driven competition titled "Shiv Kalarang – Reviving the Legacy with AI!". The event was aimed at blending historical inspiration with modern artificial intelligence, thereby encouraging students to explore innovative ways of storytelling.

The theme of the competition revolved around the life of the great Maratha warrior, Chhatrapati Shivaji Maharaj. Participants were required to describe a real-life incident from his remarkable journey and generate a poster using AI-based tools. This unique concept not only helped students revisit and reflect on the rich legacy of Shivaji Maharaj but also gave them an opportunity to experiment with AI in a creative domain.

The event received an enthusiastic response, showcasing the students' talent in both creativity and technology. After careful evaluation, Mr. Ajinkay was awarded the First Prize, while Ms. Charvi secured the Second Prize. Both winners were commended for their innovative approach and impactful presentations. The competition successfully highlighted the importance of integrating cultural heritage with modern technology and reflected PCCOE's vision of nurturing innovation, creativity, and respect for history among its students.



NEXUS '25

The Electronics and Telecommunications Students' Association (ETSA) of PCCOE hosted NEXUS '25 – The Ultimate Tech Convergence, a two-day event held on 7th and 8th March, designed to bring together technology, innovation, and creativity under the dynamic theme of Multiverse.

The event provided a platform for students to explore the vast possibilities of technology through engaging competitions and interactive sessions.

The inauguration ceremony took place on 7th March, with the presence of distinguished guests, including Dr. P.A. Deshmukh, Dean, Student Development Wing (SDW), who officially inaugurated the event. Dr. R. A. Patil, Associate Dean, SDW, Dr. S. U. Bhandari, Dean, Faculty Development Wing (FDW), Dr. Varsha Harpale, Dean, Quality Assurance (QA), and Mrs. A. S. Shinde, Faculty Coordinator, ETSA, also graced the occasion with their presence.

Following the inauguration, NEXUS '25 unfolded with four major events, challenging participants to think beyond conventional boundaries

NEXUS '25 – The Ultimate Tech Convergence lived up to its tagline, bringing together diverse talents and perspectives, fostering collaboration, and celebrating the spirit of innovation.



ETSA, ISF & IEEE SPS PCCOE PRESENTS

NEXUS

The Ultimate Tech Convergence!

Rotor X

HARDWARE HACKATHON

SOLO NOT SOLO

RAW AND UNFILTERED

50K+
PRIZE POOL

7th & 8th MARCH 2025

www.nexus25.tech 🔍

OUR PROUD SPONSORS

NEXUS '25

- **RotorX** – A two-day drone workshop conducted in collaboration with Team Maverick India, providing students with hands-on experience in drone technology and aerodynamics.
- **Hardware Hackathon** – Organized in partnership with Yorbot, this competition encouraged participants to develop innovative hardware solutions to real-world problems.
- **Solo Not Solo** – A team-based challenge where participants registered individually and were later grouped into teams. The event consisted of three rounds designed to test problem-solving, communication, and teamwork.
- **Raw and Unfiltered** – An electrifying talent showcases where students displayed their hidden talents, including singing, dancing, magic, comedy, poetry, beatboxing, and much more
- The active support of faculty coordinators, involvement of student coordinators, and participants contributed to the seamless execution of the event.



ROTOR X

Date : 7th and 8th March 2025

Venue: PCCOE

RotorX was a two-day immersive drone workshop organized under NEXUS 2025 by the Electronics and Telecommunication Students' Association (ETSA) of Pimpri Chinchwad College of Engineering, in collaboration with Team Maverick India. Designed to introduce participants to the fundamentals and real-world applications of drone technology, the event offered a perfect blend of theory, hands-on learning, and practical exposure. RotorX.docx

The workshop covered aerodynamics, drone components, assembly, integration, and piloting, allowing participants to build and operate their own drones using industry-standard kits. Guided by expert mentors, students gained valuable insights into emerging trends in the drone industry while enhancing their technical and teamwork skills.

RotorX also featured a quiz round and presentation competition, where teams showcased innovative drone-based applications and were evaluated on creativity, feasibility, and technical depth. The event concluded with exciting flight rounds, an air show, and a valedictory ceremony, making RotorX an enriching and memorable learning experience for all participants.



PIMPRI CHINCHWAD COLLEGE OF ENGINEERING, PUNE
DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION

NEXUS
The Ultimate Tech Convergence

ETSA, ISF & IEEE SPS PCCOE PRESENTS

Rotor X

A 2 - Day Drone Workshop

REGISTRATION FEES	WORKSHOP HIGHLIGHTS
GROUP REGISTRATION Rs. 700/- per participant. (3500 per group) Participate in group of 5 Free for PCCOE students!	<ul style="list-style-type: none"> ✓ Drone Kit Provided Per Group Build and take your own drone home! ✓ Hands-On Experience Assemble a drone from scratch. ✓ Air Show & Live Demonstration See professional drones and aircrafts in action.
INDIVIDUAL REGISTRATION Rs. 2500/- per participant	

Hurry Up! Only 75 seats limited!

Prize Pool: 8,000/-

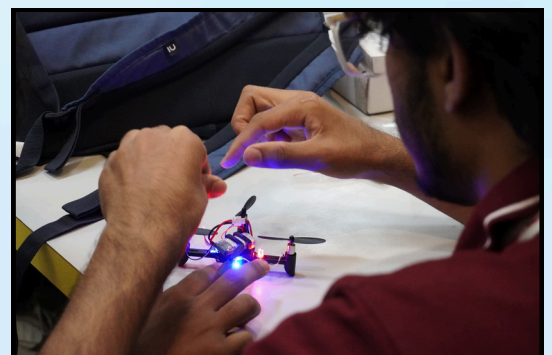
In Collaboration with
TEAM MAVERICK INDIA

7th and 8th March 2025

REGISTER NOW!

COORDINATORS

Harish Patil (+91 8767559134)
Aayush Benade (+91 8856927697)
Nimisha Halabe (+91 9028401706)



HARDWARE HACKATHON

Date : 7th March 2025

Venue: Department of ENTCT, PCCOE

Hardware Hackathon under NEXUS 2025 brought together curious minds and practical thinkers for an intense 12-hour robotics challenge that focused on turning concepts into functional hardware. Conducted by the Electronics and Telecommunication Students' Association (ETSA) of Pimpri Chinchwad College of Engineering in collaboration with Yorbot, the event emphasized innovation through hands-on problem-solving. Hardware Hackathon2025

Participants began by proposing original robotics ideas aimed at addressing real-world challenges. Shortlisted teams then moved into an on-site build phase, where they designed, assembled, and refined their prototypes within a limited timeframe. Continuous evaluation by mentors and supervisors pushed teams to think critically, adapt quickly, and improve their designs in real time.

The hackathon concluded with the selection of top-performing teams based on creativity, feasibility, and execution. By encouraging experimentation, teamwork, and practical learning, the Hardware Hackathon stood out as a high-impact technical event that strengthened students' confidence in hardware design and robotics development.



 A detailed event poster for the NEXUS Hardware Hackathon. The poster features the following information:

- Event Title:** NEXUS Hardware Hackathon - A 12 Hour Hackathon
- Organizers:** ETSA, ISF & IEEE SPS PCCOE PRESENTS
- Registration Fees:** Rs. 1,000/- per team (Participate in a group of 2 to 4 members)
- Last Day to Register:** 1st March 2025
- Event Highlights:** Round 1: Idea Submission, Round 2: Hackathon Day
- Prize Pool:** Worth 26,000+
- In Collaboration with:** Yorbot
- Timing:** 8.00 AM to 8.00 PM, 7th March 2025
- Register Now!** (with QR code)
- Coordinators:** Mayank Gangredwar (+91 7276379674), Kaushal Lawande (+91 7385139399), Harshal Lokhare (+91 9552451968)
- Logos:** PCCOE, ETSA, ISF, IEEE SPS, Yorbot, and various university logos.



SOLO NOT SOLO

Date : 7th March 2025

Venue: 3rd Floor, 6th building, ENTC dept

Solo Not Solo – Fly Solo, Crash Together was an engaging team-based event held on 7th March 2025 at the ENTC Department, with participation from 90 students. Although participants registered individually, teams were randomly formed at the start, creating a dynamic environment that encouraged adaptability, communication, and collaboration.

The event comprised three interactive rounds. The Brainrot Quiz Round tested general knowledge, logic, and speed under pressure. The Senses Challenge pushed teams to overcome sensory restrictions such as muteness or blindness, emphasizing trust and teamwork. The final Mystery Box Challenge required participants to solve riddles and puzzles collaboratively to unlock the box within a time limit.

Through its innovative format, Solo Not Solo successfully promoted social interaction, problem-solving, and teamwork in a fun and competitive setting. The event's smooth execution was made possible by the dedicated efforts of faculty coordinators, student coordinators, volunteers, and enthusiastic participants, making it a memorable and impactful experience.



PIMPRI CHINCHWAD COLLEGE OF ENGINEERING, PUNE
DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION

NEXUS
The Ultimate Tech Convergence

ETSA, ISF & IEEE SPS PCCOE PRESENTS

SOLO NOT SOLO

FLY SOLO, CRASH TOGETHER

REGISTRATION FEES	EVENT HIGHLIGHTS
50/- per Student Free for PCCOE Students	<ul style="list-style-type: none"> ✓ Round 1: Brainrot Quiz ✓ Round 2: The Senses Challenge ✓ Round 3: Mystery Box Challenge

Prize Pool: 8,000/-

2.00 PM onwards
7th March 2025

Department of EnTC

REGISTER NOW!

COORDINATORS

Risha Chopra (+91 8887115878)
Arpita Sutar (+91 9421449314)
Eshal Shaikh (+91 9325010694)

ETSA PCCOE
PCCOE IETE STUDENT FORUM
IEEE SPS PCCOE STUDENT CHAPTER



RAW AND UNFILTERED

Date : 8th March 2025

Venue: Mechanical Building Seminar Hall

Raw and Unfiltered was a vibrant talent showcase organized by the Electronics and Telecommunication Students' Association (ETSA), PCCOE, on 8th March 2025 at the Mechanical Building Seminar Hall. The event provided students from PCCOE and other institutions with an open and expressive platform to present their talents without restrictions, celebrating authenticity and creativity.

Participants showcased a wide range of performances including singing, dancing, poetry, painting, comedy, magic, beatboxing, and acting, making the event diverse and engaging. A unique self-rating concept added an exciting twist, where participants rated their own performances, and those whose ratings matched the judges' average scores were rewarded with special prizes.

With 30 participants, energetic audience engagement, and fair yet rigorous judging, the event successfully encouraged self-expression and confidence. The seamless execution of Raw and Unfiltered was made possible through the guidance of the faculty coordinator, judges, and dedicated student coordinators, resulting in a memorable celebration of raw talent and individuality.



A promotional poster for the 'RAW AND UNFILTERED' event. The poster is dark-themed with gold and white text. At the top, it lists the organizing institutions: PIMPRI CHINCHWAD COLLEGE OF ENGINEERING, PUNE, DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION. The event title 'RAW AND UNFILTERED' is prominently displayed in large, bold, gold letters, with the tagline 'YOUR STAGE, YOUR SPOTLIGHT, YOUR MOMENT!' below it. The poster includes details about registration fees (50/- per student, free for PCCOE students), event highlights (stage for every talent, self-rating challenge), a cash prize of 8,000/-, and a special guest appearance starting at 2:00 PM on 8th March 2025. It also features a QR code for registration and the names of the coordinators: Riddhi Kulkarni, Shruti Badgajar, and Anya Gavasane.



NEXUS 2025 WINNERS

Place	Event Name	Winner's Names	College Name
1 st	RotorX	Shivshankar Banakar	Pimpri Chinchwad University
2 nd	RotorX	Aditya tikone Ibaad Fadnis Vedant Padile Pawan Gunti Gauri Borhade	Pimpri Chinchwad University
3 rd	RotorX	Sarvesh Sawant Soham Vakte Karan Marathe Atharva Aloni Chinmay Patil	Pimpri Chinchwad College of Engineering
1 st	Hardware Hackathon	Harshal Patil Akshay Dhere Ayush Peshve	Pimpri Chinchwad College of Engineering
2 nd	Hardware Hackathon	Rohan Chavan Prasad Ahirrao Rohit Digole	Pimpri Chinchwad College of Engineering
3 rd	Hardware Hackathon	Anushka Nigam Prajakta More Neha Nemade	MIT Academy of Engineering
1 st	Solo not Solo	Vaibhav Bhavsar Samiksha Gaikwad Soham Pokle Harshali Nikum	Pimpri Chinchwad College of Engineering
2 nd	Solo not Solo	Pallavi Dharaskar Sanjana Biyani Tanishka Janapure [PCP] Maithili Vaidya	Pimpri Chinchwad College of Engineering
1 st	Raw and Unfiltered	Harsh Gumdel	Pimpri Chinchwad College of Engineering
1 st	Raw and Unfiltered	Arya Dabhadkar	Pimpri Chinchwad College of Engineering

ABHIYANTRIX'2025

Date : 21st Mar, 22 nd Mar 2025

Venue: 6th building , ENTC Dept.

Abhyantrix'25, the annual technical symposium held on March 21st and 22nd, 2025, was a grand celebration of innovation, research, and technological advancements, bringing together students, academicians, and industry professionals. The event featured multiple technical tracks covering Artificial Intelligence, Smart Systems, Assistive Technology, Healthcare Innovations, and more, providing a platform for knowledge exchange and collaboration. Organized by a dedicated coordinating team with faculty guidance and industry support, the symposium aimed to encourage research and development, facilitate networking, expose participants to emerging technologies, and bridge academia with industry.

The inauguration ceremony, graced by Chief Guest Mr. Anik Kumar Samantha Sir, set the stage with a keynote on interdisciplinary research and technological progress. Across two days, seven technical tracks ran, featuring expert speakers, industry insights, and interactive discussions. Notable tracks included Wearable Technology and Health Monitoring



ABHIYANTRIX'2025

Systems, Cognitive Computing and AI, Data Science and Machine Learning, IoT and Smart Networks, and Robotics and Automation. The event recognized outstanding research through Best Paper Awards and Special Mentions, motivating students to pursue further innovation. Abhyantrix'25 left a significant impact by fostering academic excellence, enhancing skills, and strengthening industry-academia collaboration. The event successfully balanced academic rigor, technical expertise, and professional exposure, ensuring participants left with valuable insights and connections. With an eye on the future, the organizing team looks forward to Abhyantrix'26, aiming for expanded themes, broader participation, and more impactful sessions, continuing its legacy as a premier platform for engineering and technology research



ABHIYANTRIX'25 WINNERS

Sr.no	Track	Group	Project Guide	Project Title
1	Data science, Big data Analysis, and machine Learning	SB05 Mandar Joshi Yash Mohite Viraj Lite Swarupa Khalatkar	Dr. Ujjwal Shirode	Detection of Vitiligo using deep learning and machine learning approach
2	Robotics, Control And Automation	A02 Tushar S. Alande Aryan A. Bharaswadkar Siddhant S. Babanagar	Dr. Varsha K. Harpale	Smart Sensor-Based Water Quality Monitoring System
3	Internet of things and smart network solutions	A12 Amit Avhad Omkar Ubale Aditya Chakre	Mrs. Sonal Shirke	Battery Monitoring and Alert Systems Using Predictive Maintenance in EVs.
4	Wearable Technology and Health monitoring System	SC05 Chinmay Bhandare Harshal Dharmapurikar Aditya Gaikwad	Mrs. Archana V. Bhamar	Gestura: Gesture to speech interpreter.
5	Signal And Image Processing	SC07 Yash Dhond Saakshi Gaikwad Parth Gorkhe	Mrs. Seema U. Deoghare	Dynamic Traffic Signal Optimization Congestion Management and Emergency Vehicle Prioritization
6	VLSI design and embedded systems	SB01 Arin Jain Anurag Biradar Rajat Katepallewar Ryan Rego Suraj Narnoliya	Dr. Deepti khurge	Analysis of Earthquake Sensing Methods and Mapping into Advanced Semiconductor Technologies
7	Cognitive Computing, Computer Vision and intelligent systems	SC16 Khushi Singh Bhaskar V. Rao	Swati V. Patil	Broadband and Compact Circularly Polarized RFID Reader Antenna for Defence Applications

EUPHORIA 2025 – FAREWELL FOR BTECH STUDENTS

Date : 18th April 2025

Venue: S. B. Patil, Auditorium, PCCOE



The Program started with an Inauguration Ceremony where our guests of honours proceeded for lamp lighting and melodious Saraswati Vandana was sung by Second year students Rewa Kulkarni and Nimisha Halabe. Every program is started with the blessings of lord Ganesh so members from art circle Ms. Jui and her partner performed as classical dance hailing lord Ganesh. The anchors Aayush Benade and Risha Chopra took charge of the program and formally invited Dr. Kishor Kinage sir to guide all the students. Further a speech was given by Mrs.



Ashwini Shinde ETSA-ISF-IEEE faculty coordinator about how ETSA has accomplished great milestones and that it has shaped students in many different ways. The felicitation program was successfully completed with the help of all the dignitaries present at the event. Students from various cells like ETSA, Sports, Research, and Technical team were honoured and appreciated for their achievements and efforts. Winners of Abhiyantrix 2025, the annual project competition, were declared and awarded for

EUPHORIA 2025 – FAREWELL FOR BTECH STUDENTS

their ideas. Mr. Samarth Gosain from Final year Entc gave a heartfelt speech on his experience in these 4 years of engineering. President of ETSA Ms. Isha Deshpande concluded the ceremony with a warm vote of thanks.

After the formal program ended anchor Mr. Harsh Pandharpatte and Mr. Harsh Gumdel took charge of the informal program(cultural). The program began with fishponds and confessions, from B.Tech members performing singing, poems. Anchor then proceeded with a segment called 'Guess the Ghibli' and then 'Face of the batch' where interesting titles were awarded to the passing out students. Charmer , Mr/Miss Brave, Iconic duos/trios etc where live voting took place so that everyone could vote and make the candidate win who felt was suitable for the award. Students enjoyed DJ for 45 mins and proceeded for dinner.

Almost 250 students and ENTC faculty attended the program and their participation contributed to becoming a successful event.



ADVANCING AUTONOMOUS MOBILITY THROUGH ADVANCED DRIVER ASSISTANCE SYSTEMS (ADAS)

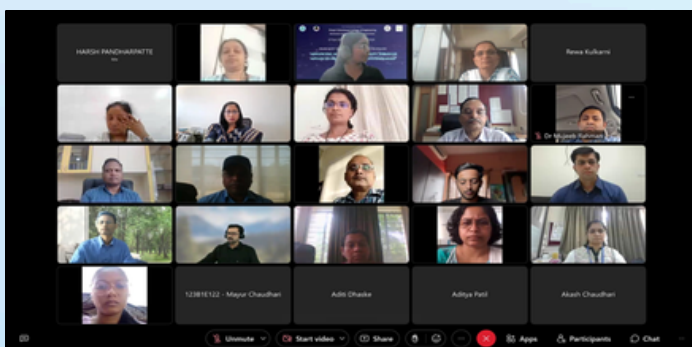
Date : 30 June-5 July 2025

Mode of Conduction: Online

The Department of Electronics and Telecommunication Engineering, PCCoE, in association with ETSA-ISF and IEEE SPS Student Chapter, organized a six-day Online STTP on “Advancing Autonomous Mobility through ADAS” from 30th June to 5th July 2025. The programme was conducted under the mentorship of Dr. G. N. Kulkarni (Director, PCCoE), Dr. N. B. Chopade (Deputy Director), Dr. K. S. Kinage (HOD, E&TC), Dr. S. L. Tade (IEEE Executive Member), and Dr. V. K. Harpale (Faculty Advisor, IEEE SPS).

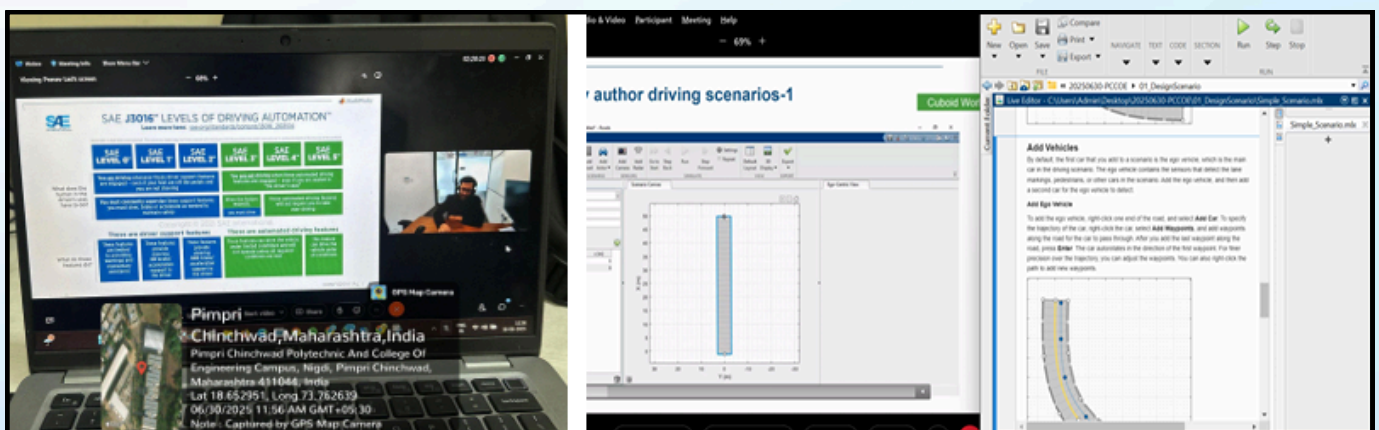
The organizing committee, comprising senior faculty members along with student coordinators Eshal Shaikh and Kaivalya Katti, worked diligently to ensure the event’s success. The STTP received enthusiastic participation from 55 PCCoE students, 57 external students, six industry professionals, and one international participant from the UAE.

The inaugural ceremony was held on 30th June 2025 through the Webex platform. Anchors Eshal Shaikh and Rewa Kulkarni welcomed the gathering, setting a warm and vibrant tone for the event, which began with Saraswati Vandana. Dr. Arti Pawar, the STTP Coordinator, provided a detailed overview of the five-day training programme, its objectives, and its structure. Dr. K. S. Kinage extended a formal welcome to dignitaries, speakers, and participants. The highlight of the inauguration was the address by the chief guest, Mr. Manas Vora, with 15+ years of experience in EV and automotive industries, was formally introduced. In his inaugural address, he highlighted the growing relevance of ADAS, appreciated the initiative, and stressed the need for academic-industry collaboration. He encouraged students to gain practical skills in simulation and system integration.



ADVANCING AUTONOMOUS MOBILITY THROUGH ADVANCED DRIVER ASSISTANCE SYSTEMS (ADAS)

The technical sessions began with Mr. Vora's talk on the fundamentals of ADAS technologies, where he explained the evolution of driver assistance systems, the significance of sensor technologies such as cameras, radar, and lidar, and the classification of autonomy levels ranging from basic driver support to fully automated driving. This was followed by an engaging session by Mr. Pranav Lad, Application Engineer at MathWorks, Pune, who introduced the features of ADAS such as lane keeping assist, adaptive cruise control, and automatic emergency braking. He elaborated on the development workflow, beginning from scenario creation and vehicle modeling to sensor calibration, decision-making, and deployment using platforms like MATLAB, Simulink, and ROS. Later in the day, Mr. Lad conducted a highly interactive hands-on session where he demonstrated the use of the Driving Scenario Designer App to simulate traffic conditions, integrate virtual sensors, and design algorithms for lane keeping and collision warning. This practical exposure allowed participants to bridge theory with application, giving them a firsthand understanding of simulation-driven ADAS development.



ARTICLES

Humanoid Robots: Redefining the Future of Technology

Sarthak Rangole

Third Year, ENTC



Humanoid robots, once a dream of science fiction, are now an exciting achievement of modern engineering. Built to replicate human appearance and behavior, they can walk on two legs, use arms to interact with objects, and even mimic facial expressions. Their biggest advantage is adaptability in human-centered environments, unlike traditional robots limited to factory floors.

The technology behind humanoid robots combines advanced robotics, artificial intelligence, and sensor systems. Actuators and motors enable human-like movement, while balance systems inspired by biomechanics help them walk steadily. Vision powered by cameras and LiDAR lets them perceive surroundings, while AI allows them to recognize faces, follow voice commands, and interpret emotions—making interaction with people more natural.

Applications are rapidly expanding. Humanoids are being tested in warehouses, airports, hospitals, and classrooms, handling repetitive and labor-intensive tasks with accuracy. This reduces human workload and boosts productivity.

Challenges remain—high cost, short battery life, safety issues, and incomplete autonomy. Yet, progress is undeniable. Companies like Boston Dynamics, Tesla, and Agility Robotics are already showcasing robots that walk, lift, and perform complex tasks once thought impossible.

 [Sarthak Rangole](#)

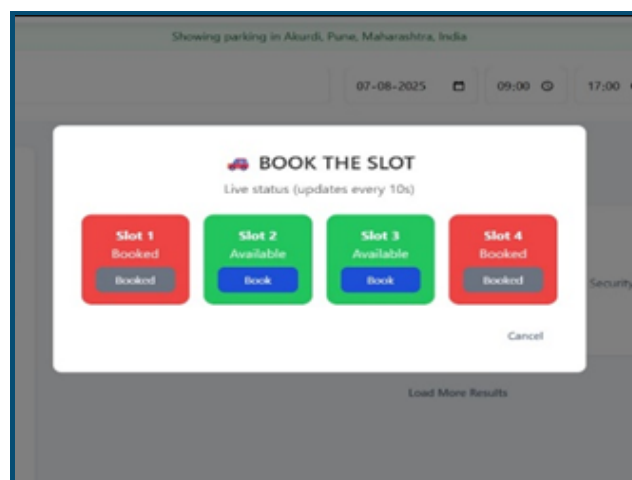
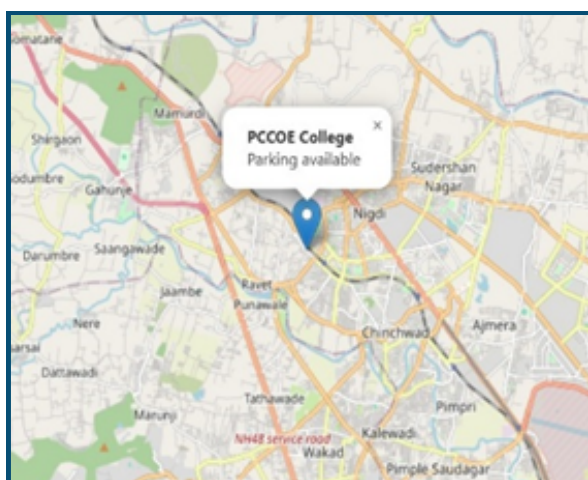
Smart Parking System: Smarter Cities Start Here!


Pranita Daphal, Nupur Kulkarni, Rajshree Gawai

Second Year, ENTTC

The Smart Parking System is designed to eliminate the daily hassle of finding parking by combining IoT, automation, and a simple interface. At its core, an ESP32 controller works with IR sensors to detect vehicles, an RFID module for secure entry, and a servo motor to manage the gate. Parking slot data is updated in real time on the ThingSpeak cloud, giving users accurate information before they arrive and reducing unnecessary movement inside parking lots.

On the user side, a web interface provides a clear map of the parking area, showing slot availability and allowing advance bookings during peak hours. This ensures faster parking, reduces congestion, and saves fuel while promoting eco-friendly practices. By blending hardware with IoT-based design, the system demonstrates how technology can solve everyday challenges and contribute to smarter, greener cities



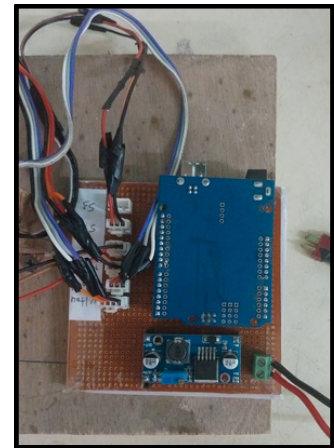
 [Prannita Daphal](#)

Waste Segregator Bot: Fostering a Sustainable Future

Girish, Asmita, Rushikesh, Pouras, Suraksha , Piyush
Second Year, ENTCT

Our project, Waste Segregator Bot: Fostering a Sustainable Future, aimed to address the growing challenges of improper waste disposal through a blend of technology and awareness. We developed an automated waste segregator capable of sorting waste into wet, dry, and metal categories using sensors like moisture, ultrasonic, and metal detectors, controlled by an Arduino Nano. Alongside the hardware, we conducted surveys and awareness drives through posters, social media campaigns, and community sessions to understand and improve public knowledge of waste management.

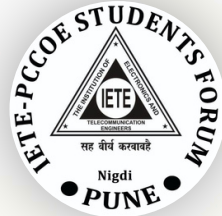
Survey results showed that while most people are aware of waste segregation, consistent practices and e-waste disposal remain challenges. Our robot prototype successfully demonstrated efficient segregation, overcoming issues of detection delay and structural instability by enhancing sensor design and adding counterweights. Recognized with the 1st prize in the CEP competition, this initiative highlights how education, community engagement, and technology can work together to solve real-world problems.



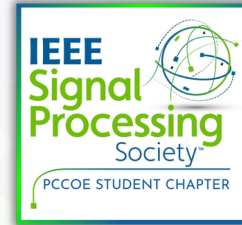
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- To create a platform for students to plan, organize and execute various activities in the interest of student development.
- It's an association of students for students and by students. To promote the general welfare of the students; to encourage personal responsibility & loyalty

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