



MAHATMA EDUCATION SOCIETY'S  
**PILLAI GROUP OF INSTITUTIONS**  
PRESENTS



*Pillai*



# • HackRobo 1.0 •

**2-Days Long National Level Hackathon**

Organised by

Department of Mechanical Engineering, Automobile Engineering,  
Electronics & Telecommunication and Electronics & Computer Science  
Engineering  
In Association with



**Domain : Intelligent Crawling Bot for Real-World Impact**

# HACKATHON BROCHURE

TECH ALEGRIA



• HackRobo 1.0 •

# About HackRobo 1.0

HackRobo 1.0 is 2 Days National Level hands-on hardware hackathon that brings together innovative minds to design, build, and showcase real-world solutions.

It offers a platform for creative collaboration across electronics, robotics, and mechanical systems. Join us as we turn bold engineering ideas into reality.

- Date : 19th – 20th September ,2025
- Team Size : 3–5 members
  - Open for all branches of UG
  - All members must be from same institute
- Registration Fees : Rs. 2000 per team

**PRIZE POOL : Rs. 50,000/-**



## About Us •

### • Pillai College of Engineering

Mahatma Education Society's Pillai College of Engineering, PCE, was established in 1999 as a self-financed Malayalam Linguistic Minority Institute affiliated to University of Mumbai, approved by AICTE and Recognized by Govt. of Maharashtra. Pillai College of Engineering was started as Pillai Institute of Information Technology, Engineering, Media Studies and Research, and popularly known as PIIT in the year 2000.

### • Students' Council

The Students' Council at Pillai College of Engineering is the official student body focused on representing student voices and enhancing campus life. It collaborates with the administration to address concerns and promote academic, personal, and mental well-being through events like workshops, festivals, sports, and mentorship programs. The Council aims to create an inclusive and empowering environment for all students.



## About Us •

### • AESA-MESA

AESA-MESA is the official Mechanical and Automobile Engineering committee at Pillai College, promoting technical growth through workshops, visits, and expert talks. It bridges academics with real-world experience and fosters innovation through initiatives like the Space Wing and ANUBHAV.

### • IEEE-PCE

The IEEE Student Branch at Pillai College of Engineering promotes innovation and skill development through workshops, competitions, and industry links. As part of the global IEEE network, it connects students to real-world applications, research, and global opportunities.

### • ISHRAE

ISHRAE PCE, a sub-chapter under the Thane Chapter, offers Mechanical and Automobile students industrial visits, internships, and placement support through Job Junction. It hosts national competitions like AQUEST and ISPG, and conducts K12 outreach programs, blending technical growth with social impact.





## About Us •

### • IETE-SF PCE

IETE-SF PCE, established in September 2024, promotes innovation, leadership, and technical growth for Electronics and Telecommunication students. It bridges academics with industry through workshops, quizzes, visits, and expert talks. With the motto "Learn, Innovate, Collaborate," it empowers students to grow professionally and personally.

### • SAE-PCE

SAE PCE is the official SAE club at Pillai College of Engineering, focused on practical learning and innovation in mobility engineering. It offers workshops, seminars, and national competitions to help students build real-world skills, bridge academic and industry gaps, and grow as future automotive professionals.



# • HackRobo 1.0 •

## • Domain •

### • Intelligent Crawling Bot for Real-World Impact

In a world increasingly dependent on automation and smart systems, real-world environments like disaster zones, industrial pipelines, agricultural fields, and public infrastructure pose significant challenges for human access and real-time data collection. Your mission in HackRobo 1.0 is to design and prototype a hardware-based crawling robot

### • PROBLEM CATEGORIES

#### • RescueBOT (Search & Rescue)

Design and develop a crawling robot that can navigate through rubble, debris, or confined spaces to locate and assist survivors in disaster scenarios.

#### • PipeGuard (Inspection and Maintenance)

Design and develop a crawling robot that can inspect and maintain pipes, ducts, and other hard-to-reach infrastructure in industries such as oil and gas, chemical processing, and HVAC.

#### • TerraQuest (Exploration)

Design and develop a crawling robot that can explore and map unknown or hard-to-reach environments, such as caves, tunnels, or disaster zones.



# • HackRobo 1.0 •

- **BridgeBot (Bridge Inspection)**

Design and develop a crawling robot that can inspect bridges, detecting cracks, corrosion, and other structural issues to ensure safety and prevent catastrophic failures.

- **AgriCrawler (Agricultural Monitoring)**

Design and develop a crawling robot that can monitor crop health, detect pests and diseases, and track environmental conditions in agricultural fields.

## **Why Hackrobo 1.0**

**Real world  
Problem Solving**

**Networking  
Opportunities**

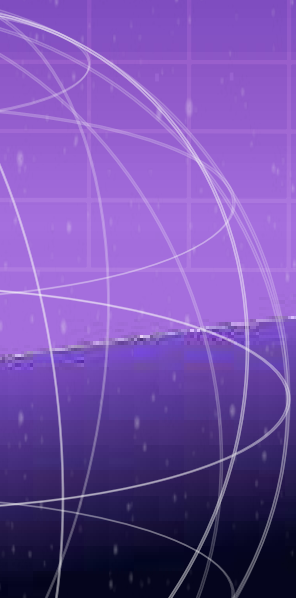
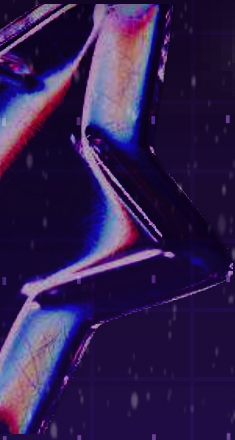
**Mentor Guidance**

**Jamming Sessions**

**Exciting Goodies**

**Internship  
Opportunities**

**Exclusive Goodies  
For Girl Participants**





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# PRIZE POOL

**Rs 50,000**  
**(Cash + Goodies)**

**Top 5 Teams**  
**Win Extra Goodies**

**Winners**  
**Top 3 Teams Will**  
**Recieve Cash Prize**

## Facilities:

- **Free Accommodation**  
Accomodation within campus.
- **Free Accessibility**  
Breakfast, Lunch, Dinner

## Additional Perks:

- **Participation Certificate**
- **Winner Certificate**



# Schedule

## Day 1:

**8:00 AM** – Registration and Breakfast

**10.00 AM** – Orientation and Opening

**10.30 AM** – Hackathon Begins

**1.00 PM** – Lunch

**2.00 PM** – Mentoring Round

**7.00 PM** – Networking and Jamming Sesseion

**8.00 PM** – Dinner

Hackathon Continues.....

## Day 2:

**8:00 AM** – Breakfast

**10.00 AM** – Mentoring Round

**1.00 PM** – Lunch

**2.30 PM** – Final Submission

**3.00 PM** – Judging Round

**6.00 PM** – Winner Announcement



# Timeline



## 02. Collaboration & Mentorship

Teams brainstorm and build with support from expert mentors to shape impactful, real-world solutions.

## 04. Final Touches & Submission

Last-minute refinements, mentorship, and final submissions mark the sprint to the finish line.

## 01. Kickoff & Registration

Participants register, get oriented, and officially begin their hackathon journey with the challenge launch.

## 03. Evening & Recharge

An evening to relax, connect, and refresh through networking, jamming sessions, and dinner.

## 05. Judgement & Celebration

Judges evaluate top ideas, winners are announced, and the event wraps up with celebration and recognition.





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## • Rules and Regulations •

Teams must consist of 3 to 5 members; cross-college teams are allowed.

Each team may submit only one idea, which must be original and developed during the hackathon.

Plagiarism or replication of existing solutions without significant modification will lead to immediate disqualification.

Submissions must be made through Google Form.

A working prototype or simulation is mandatory in Finals.

Judges' decisions are final and binding, and they may request technical clarifications or design justifications during evaluations.

Prize distribution and internship opportunities for top-performing teams are subject to performance.

Teams must stay active and responsive regarding review schedules.

All team members must bring their own devices and stay on campus for the full duration of the offline event; accommodation will be provided.

Only official communications shared via the event website and email should be followed and any other official communication if required will be conveyed to the Team captains.



# • HackRobo 1.0 •

## • FAQ •

### Q1. What is HackRobo?

HackRobo is a 2-day national-level hardware hackathon focused on robotics, embedded systems, IoT, and smart hardware innovations. It brings together tech enthusiasts, developers, and innovators to design and prototype functional hardware solutions addressing real-world problems.

### Q2. When and where is HackRobo taking place?

The event will be held on 19 -20, September 2025 at, Pillai College of Engineering, Panvel, Navi Mumbai.

### Q3. How do I register?

You can register online through our official website at [<https://tech.alegria.co.in/>]. Early registration is recommended due to limited slots.

### Q4. Is there a registration fee?

Yes, a nominal fee of 2000 per team is required to confirm participation. This covers meals, workspace, and participation kits.

### Q5. Can students from different colleges form a single team?

Yes! Cross-college teams are absolutely allowed. We encourage collaboration and diversity of ideas.



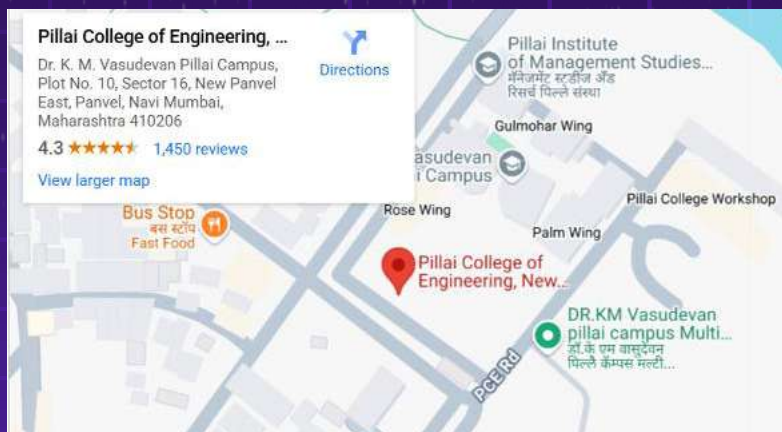
• HackRobo 1.0 •

# Join us

We highly appreciate and welcome your feedback and suggestions. Please feel free to contact us at any time. We are committed to going above and beyond to ensure that your experience at the Hackrobo is truly memorable.

• Location :

Pillai College of Engineering, Plot no-10, Sector-16, New Panvel East, Navi Mumbai, Maharashtra



• Contact Details : HARIOM JAT | 8850646595

SANIYA MAHADIK | 7506041034

• Register Here : <https://pages.razorpay.com/tech-alegria-hackrobo-1.0>



<https://tech.alegria.co.in/>

