NXP Cup India 2026

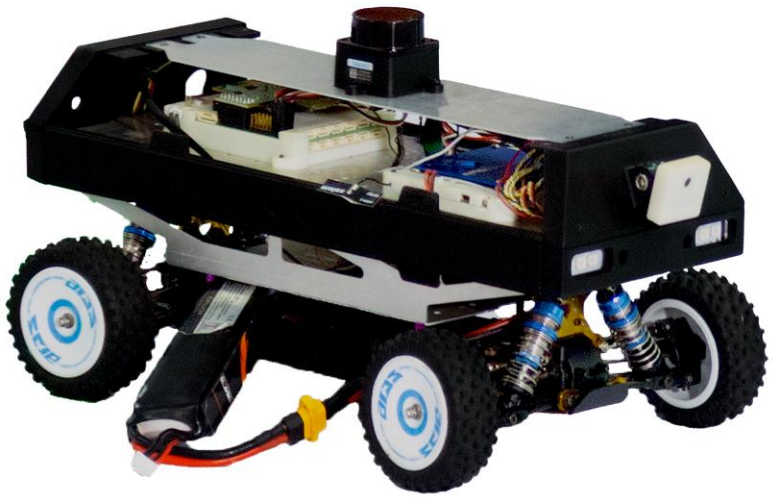
Previously known as NXP AIM India

Brighter Together

NXP AIM India is now

NXP Cup India

same legacy, stronger challenge



About NXP Cup India 2026

https://www.nxp.com/nxp-cup-india

- NXP Cup India, is an exciting platform for engineering students to dive into the world of AI in Mobility and Robotics.
- Students design and create mobile robotics prototypes using cutting-edge technologies like AI/ML, object/sign recognition, sensors, motion detection, computer vision, and obstacle avoidance.
- It's a learning challenge where students get trained on ROS and Gazebo Simulator.
- Students will participate in multiple challenges both in simulation and real-world environment.

NXP Cup India 2026

Eligibility Criteria

Only students of **16–26 years** as on 1st April 2026 and **currently pursuing UG/PG in Engineering** from registered Indian colleges.

Team Size:
1 to 4 members

Exciting awards to grab:

1st
Grand Finale : ₹ 1,00,000

2nd
Grand Finale : ₹ 75,000

3rd
Grand Finale : ₹ 50,000

Grand Finale
AI Arjuna Award: ₹ 10,000

Innovation Edge Award: ₹ 10,000

Precision Excellence Award: ₹ 10,000

Regional Finale
Winner of Regional Finale : ₹ 10,000

Features and Benefits

This fun and interesting event is targeted for engineering students, aged between 16-26 years, exposing them to program embedded controllers, develop algorithms for autonomy, and explore the world of artificial intelligence and automated driving. The vision of the challenge is to create well-rounded youth with industry skill sets and help them with the technical knowledge required for the new-age technologies.

Ease of Access

An intuitive online platform for managing the entire competition process, from registration and training to team management, submissions, and results.

Free Tutorials

An opportunity to learn, practice and perform in the whole new era of Artificial Intelligence.

New-age Technologies

Gain exposure to cutting-edge technologies such as AI/ML algorithms, object recognition, sensors, sign recognition, obstacle detection, computer vision, image processing, and more.

Industry Talks

Embark on a journey that opens endless opportunities in the AI domain, with the chance to meet and interact with leading industry experts across various fields.

Personal Development

Develop well-rounded skills such as communication, interpersonal abilities, ethics, presentation, adaptability, social responsibility, and productivity.

NXP Cup India 2026 - Challenge Background

- NXP Cup India, It's not just a race on a track, but a challenge to solve real-world problems. How to tackle real-world issues with creative solutions. This learning challenge aims to design Mobile Robotics Prototypes by integrating various sensors inputs like camera, Lidar, etc.
- In the Regional Finale, teams compete in a virtual environment using the Gazebo simulator.
- Post-Selection in the regionals, selected teams receive MR-Buggy3 hardware kit (returnable).
- In Grand Finale, teams needs to compete in a real-world environment. Design and Develop:
  - Sensor processing software
  - Sign and object recognition
  - Obstacle avoidance
  - Self-driving robotics algorithm
- **Evaluation:**
  - Participants need to complete task as fast as possible with minimum penalties. Details will be provided during training sessions.

NXP Cup India 2026 Challenge - Autonomous Medical Response

Participate and design a **Mobile Robotics Prototype (MR-Buggy3)** for Autonomous Medical Response, focusing on rover driving algorithms using integrated **camera & LiDAR** inputs.

- **Efficient Navigation**: Develop algorithms for the path planning and control for reliable movement in complex city-like environments.
- **Perception Accuracy**: Implement systems for real-time patient identification, localization, and correct pickup-delivery mapping.
- **Safety and Criticality**: Ensure the rover should deliver patient on time to the correct hospital safely by detecting road signs and avoiding obstacles.
- **Data Integration**: Integrate camera and LiDAR data for precise localization, road sign detection and movement within the city, enhancing the rover's ability to perform tasks autonomously.
- **Operational Optimization** : Minimum delivery time with route and energy efficiency.

TimeLine

Registration

- 2nd week of June to 2nd week of July, 2026
- Team qualification as per eligibility criteria listed on web-portal

Model Creation

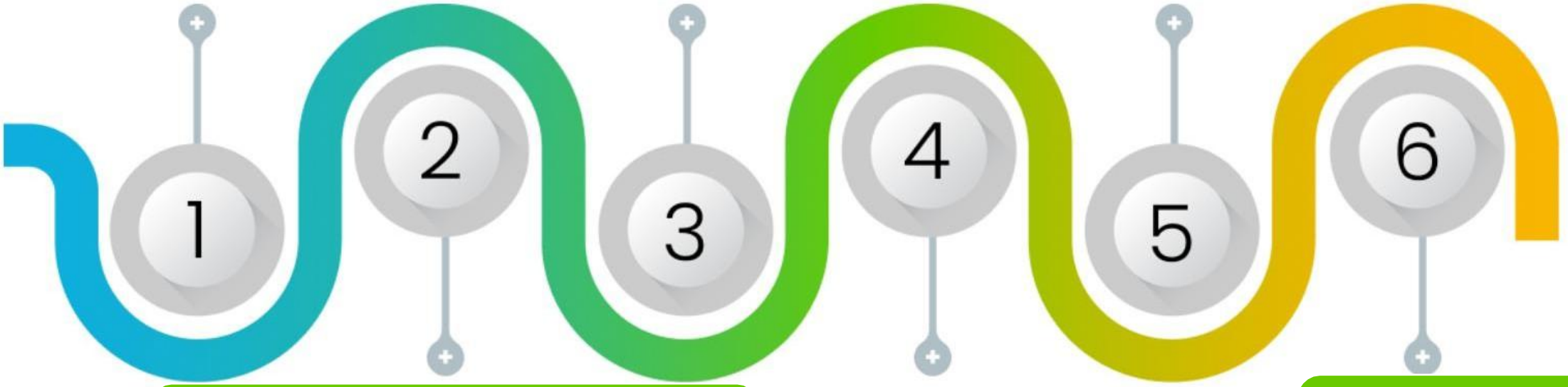
- Use Gazebo robotics simulator
- Design & Develop mobile robotics model for Autonomous Medical Response.

Challenge details will be provided in Virtual Training Session #1.

Virtual Training Session#2

(for Grand Final selected team)

- September 2026.
- Delivered on-line, during evening
- Training with NXP MR-Buggy3 HW Kit (WITB Mobile Robotics Platform, CANHUBK344-S32K344-Q172 Eval Board, LiDAR, NavQPlus with Camera).



Virtual Training Session#1

- Mid of July 2026
- Delivered on-line, during evening
- Software Tools Gazebo Simulator, ROS Operating System, AI/ML, Open CV, etc.

Regional Finale

- Mid of August 2026
- Demonstrate your model in virtual environment (No NXP Hardware).
- Best performing teams will be selected for Grand Finale and will be provided with NXP MR-Buggy3 HW Kits (returnable).

Grand Finale

- November 2026
- In-person event at NXP India.
- Compete with MR-Buggy3 HW in real world. Participate, Win Awards, Be the Champion!
- Travel support reimbursed as per guidelines

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