

## TECHFEST 2022-23 PLAYTO-NATIONAL ROBOTICS COMPETITION

### ABOUT THE COMPETITION

Robotics is the new future. Robots are versatile machines, evidenced by their wide variety of forms and functions. Artificial Intelligence (AI) increases human-robot interaction and enhances the creative abilities in robotics. Participants are expected to build a robotics project on the theme **smart city** which is explained in detail below.

#### Use of Robotics in making Smart City:

In a "smart city," data is collected from scattered sensors across the area and sent to centralized data centers, where it is used to boost system performance and enhance citizen services.

Use of Robotics, the Internet of Things (IoT) technologies to build smart sustainable cities for the benefit of society and humanity at large.

The creation of communities that will assist further advancements in access to energy can be accelerated through smart cities.

Do consider the following things while making a robotics project for a smart city

1. **Education**
2. **Health**
3. **Traffic and Transportation**
4. **Sustainable energy conservation**
5. **weather monitoring**
6. **Waste management**

#### NOTE:

*The Jury will look out for a fresh idea and a model or prototype that uses engineering concepts to bring efficiency and convenience. You are encouraged to ideate as a free thinker and come up with innovative solutions based on the above theme.*

There will be an online webinar session for all the participants to guide them for this competition.



## TIMELINE

Idea submission deadline	November 30
Last date of Registration	November 30
Approval of (written) idea	Within 24 hours of submission
2nd Round Presentation at IIT Bombay	16th-18th December
Final Presentation at Bangalore	TBD

## ELIGIBILITY

Anyone studying in classes 2th to 10th (both included) in a school situated in India can participate in this competition. Participants can register as an individual or as a part of a team. Participating teams can have a maximum of 4 members.

There is NO entry fee for participating in the competition.

## GENERAL RULES:

- Every team has to register online on the official Techfest website for the competition.
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- A Team ID will be allocated to the team on registration which shall be used for future references.
- The decision of the organizers or judges shall be treated as final and binding on all.
- No responsibility will be held by Techfest, IIT Bombay for any late, lost, or misdirected entries.
- Note that at any point in time the latest information will be that which is on the website. However, registered participants will be informed through mail about any changes.
- All modes of official communication will be through the Techfest e-mail. Participants are advised to keep track of all folders in their e-mail accounts

## STRUCTURE

### ROUND 1: IDEA SUBMISSION

Every participant has to submit a project report which he/she plans to use for making a working Model. You must express your idea in less than 250 words. The idea must be approved by the Techfest jury to get shortlisted for the 2nd round. The Jury can also advise you to re-work on the idea before re-submission.

Participating teams have to submit a complete abstract about the process you came up with. It must include:

**Statement of the Problem-** A succinct definition of the problem addressed.

**Objectives-** What is your motivation? What are the objectives the prototype is developed for?

**Introduction to Proposed Solution-** Explain the ideation behind the proposed solution. You are encouraged to include other relevant metrics and parameters besides the ones provided to you.

**Current Development Stage-** Share insights as to how developed your solution is as of the date you are submitting the abstract.

**Novelty of Approach-** How is your solution better than the existing approaches? Is there something unique to your solution that makes it stand out?

### ROUND 2: DEMONSTRATION OF PROJECT AT IIT BOMBAY

All selected participants from round 1 will be invited to demonstrate their model in front of the Techfest Jury in person at Techfest, IIT Bombay. All participants will be given 10 minutes each to demonstrate the idea and showcase their robotics model. The jury may ask some questions to the participants. Each jury will provide individual scores to all participants based on:

**a) Working model of the robotics project**

**b) Presentation and Q&A-** The judges will ask some questions related to the model.

The final winner will be decided based on the combined scores of all jury members.

### ROUND 3: FINAL PRESENTATION AT BANGLORE

All finalists will be invited to demonstrate their model at **Bangalore**. All participants will be given 10 minutes each to demonstrate the idea and showcase the working model of the robot.



## **CERTIFICATE POLICY**

The participants selected for round 2 will be given a certificate of excellence. All qualifying participants will get a participation certificate.

## **PRIZES**

The prize money will be awarded to the top 5 winners via NEFT and will be processed within 30 working days after receiving the prize money from sponsors. Winners have to mail the following information (immediately after the announcement of results) to

[abhishek@techfest.org](mailto:abhishek@techfest.org)

Subject: Name, Team ID, Position (example-Playto-National Robotics Competition, RC-3256,3rd)

### **The body of the mail must contain**

1. Account Holder's Name
2. Account Number
3. Bank name and Branch name.
4. IFSC Code
5. Photograph of Bank Passbook as a proof