



eYantra

Engineering a better tomorrow

ERTS Lab  
Department of Computer Science and Engineering  
Indian Institute of Technology Bombay,  
Powai, Mumbai-400 076.



## Certificate of Merit

This is to certify that Saurav Kumar, a student of Manipal Institute of Technology, Karnataka has participated in the Grand Finale of **e-Yantra Robotics Competition (eYRC 2021-22)** held on April 2<sup>nd</sup>, 2022.

He/She is a member of the team having the following team members:

1. Anagh Benjwal
2. Rahul Pandove
3. Saurav Kumar

This team has been selected as one of 6 **finalists** out of 260 **teams** in the Berryminator theme and has been placed at 6<sup>th</sup> **position** in this theme.

Prof. Kavi Arya  
Principal Investigator, e-Yantra  
Professor  
Department of Computer Science and Engineering  
Indian Institute of Technology Bombay



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### Theme: *Berryminator*

**Theme Description:** The theme is set in a simulated environment where indoor vertical farming is explored. The arena is an abstraction of a farm where different types of berries are cultivated in vertically stacked trays in different rooms. A robot navigates through these rooms and galleries of the farm and harvest berries based on factors such as: size, ripeness and quantity required. In this theme, the students get to design, simulate and code their own robotic mechanism. After completing this theme, participants will be confident in deploying robotic applications using CoppeliaSim, OpenCV, Python and CAD.

**Theme Learning:** *Robotic Simulation, Image Processing, 3D Designing, Algorithm Building, Robot Navigation and localization, Python programming and Lua programming.*

**Team Learning:** The team has been awarded **Level 1** in the e-Yantra Robotics Competition (eYRC).

*This level indicates that the team was able to show high competence in the competition and reached the ultimate goal of solving the whole implementation and reached the finals (top 5-8 teams) after 7 months of hard work.*

**Certificate Table**

Certificate Level	Certificate Description
Level 1	Certificate of Merit
Level 2	Certificate of Completion
Level 3	Certificate of Participation
Level 4	Letter of Participation

\*level 1 > level 2 > level 3 > level 4