DJI RoboMaster
Dec. 7, 2018

# ICRA 2018 DJI RoboMaster AI Challenge Overview

The ICRA 2018 DJI RoboMaster AI Challenge is jointly organized by the IEEE International Conference on Robotics and Automation, and the DJI RoboMaster Organizing Committee. The challenge serves as an innovative platform for exceptional engineers and robot enthusiasts.

The ICRA DJI RoboMaster Challenge has attracted worldwide academic attention. Top international universities such as the University of Washington, the University of Koblenz-Landau and the Nanyang Technological University took part in 2017. After three days of fierce competition, the Northeast University from China won the championship.

This annual challenge takes place during the IEEE ICRA. The ICRA 2018 DJI RoboMaster AI Challenge is currently open for registration.

## About the Competition

The ICRA 2018 conference will be held from May 21-25, 2018 at the Brisbane Convention & Exhibition Centre, Australia. As part of the conference, the DJI RoboMaster AI Challenge aims to establish a showcase for engineers to demonstrate their capabilities.

The challenge is open to any university group. Each team can have up to 10 members. Teams must sign up by the registration deadline. After successfully registering, teams are required to submit a technical report. The specifications for the report are stated in the challenge rules. Teams are eligible to compete in the ICRA 2018 DJI RoboMaster AI Challenge if their technical report is approved.

## The Challenge

The ICRA 2018 DJI RoboMaster AI Challenge requires robots to drive and launch projectiles using artificial intelligence related technologies. Each team is required to build up to TWO autonomous AI robots to compete in a 5m × 8m arena filled with various obstacles. To win, a team must defeat TWO AI robots presented by the RoboMaster Organizing Committee.

# Recommended Team Structure

1 student (undergraduate or graduate) responsible for embedded system programming.

2 students (undergraduate) responsible for mechanical support and hardware maintenance.

3 students (undergraduate or graduate) responsible for software system architecture, sensor processing.

2 students (undergraduate or graduate) responsible for image processing, computer vision, sensor fusion.

2 students (graduate) responsible for decision making, trajectory generation & execution.

While not mandatory, it is recommended for a team to have a Project Manager who arranges project schedule and utilizes financial resources.

# Competition Timetable

| IMPORTANT DATES | EVENT | NOTES |
|---|---|---|
| Dec. 1-31 2017 23:59 | Registration | Register at: http://www.robomaster.com/en-US/user/login |
| Dec. 1 2017 00:00 – Jan. 1 2018 23:59 | Deadline for Technical Proposal (Optional) | Online submission<br><br>The teams with the best proposals will be sponsored robot components. |
| Jan. 1 2018 00:00 – Apr. 10 2018 23:59 | Deadline for Technical Report | Online submission (mandatory)<br><br>Passing teams will qualify for the competition and will be sponsored travel costs. |
| Apr. 20 2018 | Finalists Declared | |
| May 21-24 2018 | Competition Days | |

* The above mentioned times are specified as Beijing Time (UTC+8:00). Please look for future updates and announcements released by RMOC.

*Note: The specifications for technical proposals and technical report will be released by the RMOC on the official website.

# Awards

| Ranking | Awards Per Team | Prizes |
|---------|-----------------|--------|
| Champion | 1 | Cash prizes：20,000 USD（before taxes）<br><br>Each member will be granted a certificate and a DJI Phantom 4 Pro |
| Runner-Up | 1 | Cash prizes：10,000 USD（before taxes）<br><br>Each member will be granted a certificate and a DJI Mavic Pro Platinum |
| Third Place | 1 | Cash prizes：5,000 USD（before taxes）<br><br>Each member will be granted a certificate and a DJI Spark |
| Finalists | Several | Cash prizes：1,000 USD（before taxes）<br><br>Each member will be granted a certificate and gadgets |

*Note：Certificates are jointly issued by the ICRA 2018 Organizing Committee and the RoboMaster Organizing Committee.

# Contact us

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