

# Robotics Competition

---

# What are Robotics competitions

A sports like platform wherein participants design and build a robot to complete a set of tasks or compete with other teams to score points

# Why robotics competitions

1. **Hands-on STEM Learning:** Students apply science, technology, engineering, and Math concepts in a practical, engaging way.
2. **Problem-Solving & Teamwork:** Competitions foster critical thinking, collaboration, and effective communication skills.
3. **Coding & Technology Skills:** Students master programming and robotics-related technologies, preparing them for future careers.
4. **Confidence & Resilience:** The challenges and successes of competitions build confidence, adaptability, and a willingness to take on difficult problems.

# FIRST Robotics Challenge

<https://www.firstinspires.org/robotics/frc>

Under strict rules and limited time and resources, teams of high school students are challenged to build industrial-size robots to play a difficult field game in alliance with other teams, while also fundraising to meet their goals, designing a team “brand,” and advancing respect and appreciation for STEM within the local community

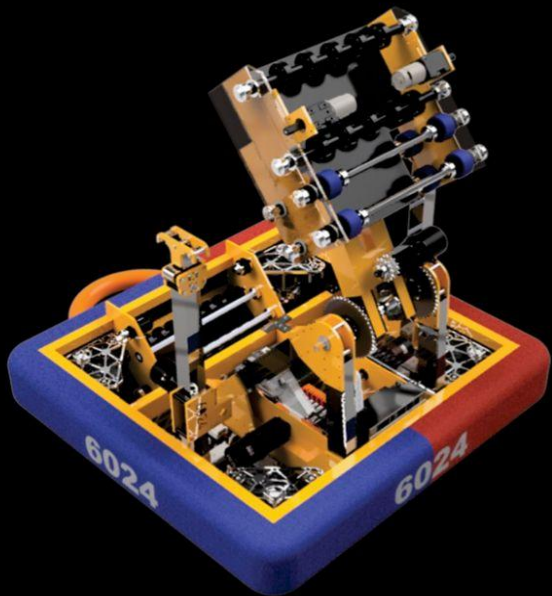
---

Happens at International level only

Two students from Goa Sai Pranav Gandhi and Viraj Marathe joined the Mumbai based FRC team and built a robot weighing 55 kgs to compete at Turkey to reach semi finals and win the Industrial Design award

<https://www.facebook.com/team6024/posts/pfbid02shVcJMqX3Wamns65bDLgAm6PKgLjfxCRYTxnizMDMoifFwkyX11Z1TCDAUsETCKLI>





# R FACTOR TEAM 6024

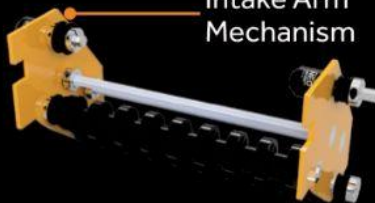
Winning Hearts with  
Winning Efforts!



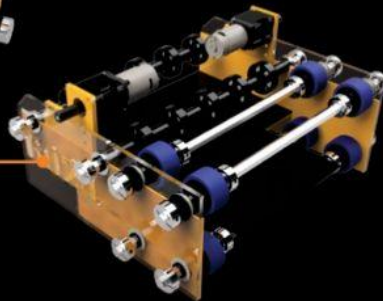
Swerve Drive



Intake Arm  
Mechanism



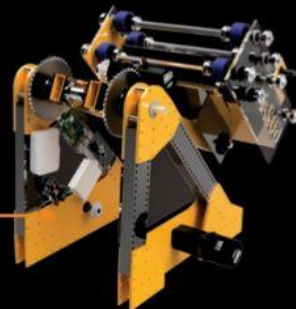
Variable Angled  
Shooter Mechanism



Climber  
Mechanism



Shooter Arm  
Mechanism





# FIRST Global Challenge

<https://first.global>

The FIRST Global Challenge is an Olympics-style, international robotics competition that takes place in a different country each year. FIRST Global invites 195+ nations to send a team to build and program a robot to compete.

---

Happens at the National and International level



FIRST  
CUBICAL

FIRST  
CUBICAL

1:28

PAK |  
SSD |  
ARM |

0 5

LSD  
KWT  
IND

NAHIL 100

WEST BAHU 100

The selection of Team India happens with a STEM challenge and in 2023, a Goan team won the STEM challenge and represented India at Singapore and won 4 awards

<https://stemeducationtrust.org/lam-research-shines-a-spotlight-on-team-india-as-part-of-first-global-challenge/>



The STEM challenge for 2024 is to Design and build a robot that can walk without using electricity.

<https://stemeducationtrust.org/stem-challenge/>



**DIY ROBOT  
COMPETITION**  
*Global Challenge*

The banner features a collage of images on the right side, including students holding national flags (Brazil, Denmark, France, UK) and students working on their robots. At the bottom, there are logos for STEM Education Trust (with the tagline 'Inspire by doing, Empower'), FIRST GLOBAL, and a logo for the competition.

# MakeX Robotics

<https://makebot.in/makex>

MakeX is a robotics competition platform that promotes multidisciplinary learning within the fields of science and technology. It happens for various age groups and one needs to have the Makex robot kit.

---

Happens at the Regional, National and International level

The Goan team of Viraj Marathe and Sai Pranav Gandhi has had National and International success in this competition as seen at [https://www.thegoan.net/tg-life/%EF%BB%BFmaking-india-proud-goan-kids-play-robot\(ic\)s-on-international-stage/92358.html](https://www.thegoan.net/tg-life/%EF%BB%BFmaking-india-proud-goan-kids-play-robot(ic)s-on-international-stage/92358.html)



# FIRST Tech Challenge

<https://www.firstinspires.org/robotics/ftc>

FIRST Tech Challenge students learn to think like engineers. Teams design, build, and code robots to compete in an alliance format against other teams. Robots are built from a reusable platform, powered by Android technology and coded using blocks or Java

---

Happens at the National and International level

Goan teams started participating in FTC since 2022 and the 2023 National Level FTC championship happened in Goan wherein over 7 Goan teams participated

We would have Team Techinfinity from Saraswat school demonstrating their robot.

# FIRST Lego League

<https://www.firstlegoleague.org>

The FIRST LEGO League Challenge is an international competition organized by FIRST for elementary and middle school students. Each year in August, FIRST LEGO League Challenge teams are introduced to a scientific and real-world challenge for teams to focus and research on

---

Happens at the Regional, National and International level



# World Robot Olympiad

<https://wroindia.org/>

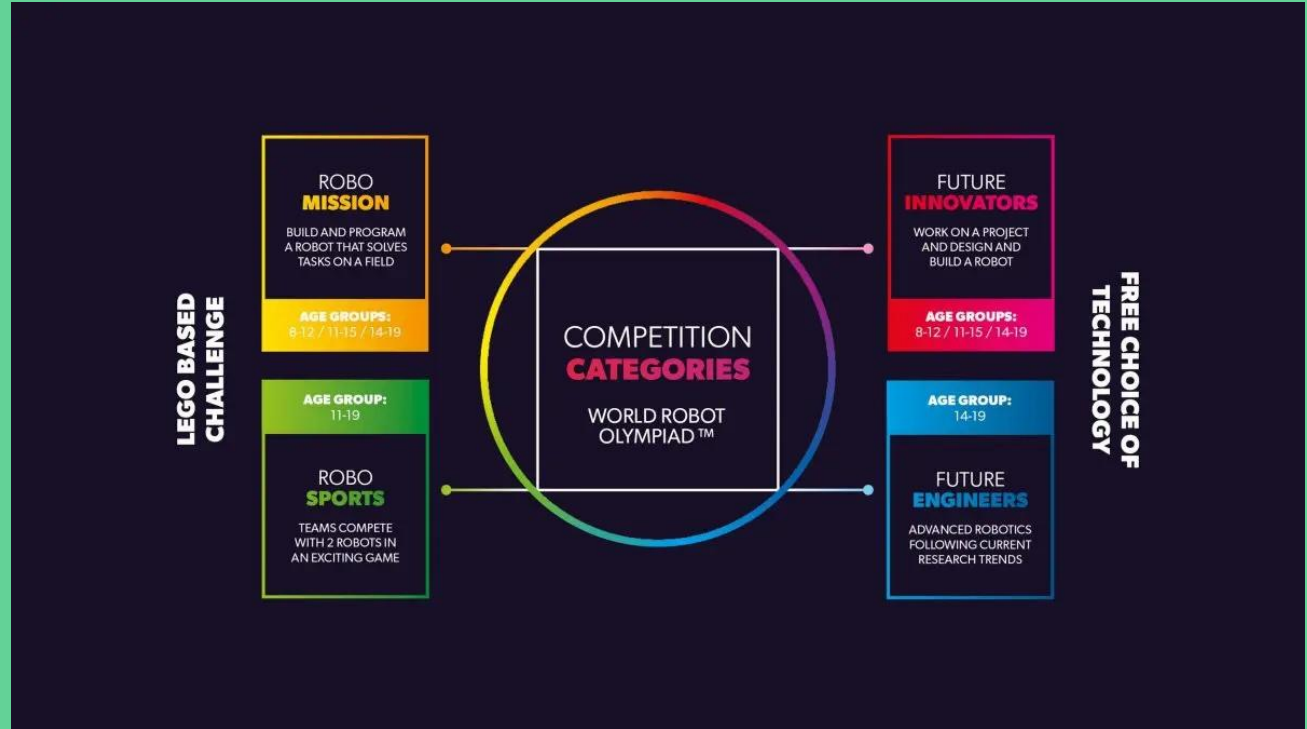
The World Robot Olympiad (WRO) is a global robotics competition for young people. First held in 2004 in Singapore, it now attracts more than 28,000 teams from more than 85 countries.

The competition consists of 4 different categories: RoboMission, RoboSports, Future Innovators, Future Engineers.

---

Happens at the Regional, National and International level

Happens in two tracks, one is the innovative project track and doesn't need a specific robotics kit. The second track is based on the Lego robotics kit. Goan teams have participated in the past WRO and won at Regional levels <https://timesofindia.indiatimes.com/city/goa/3-goan-kids-build-robot-bag-11th-rank-in-national-contest/articleshow/87573981.cms>



# Codeavour

<https://codeavour.org>

Codeavour is an International Fest hosted annually by STEMpedia, where participants make innovative projects with hands-on learning using PictoBlox to make the world a better place.

---

Happens at the Regional, National and International level



# HELP USHA BRING ROBOTICS GLORY TO GOA !!

## FIRST GIRL FROM GOA TO QUALIFY FOR THE INTERNATIONAL ROBOTICS COMPETITION IN DUBAI

### Goan students to showcase talents at Codeavour 5.0 championship in Dubai

**A robotic team of Goan students has made it to the international competition Codeavour 5.0, a global AI, Coding and Robotics Championship to be held on May 6 & 7 at Dubai, mentor and computer teacher at Progress High School, Maya Kamat speaks to 'The Goan' why the students are looking forward to crowd-funding to raise the expenses**

The team, which includes students from various schools in Goa, is participating in the international competition 'Codeavour 5.0' in Dubai, UAE. The team is led by Maya Kamat, a computer teacher at Progress High School, and is supported by other teachers and students. The team has qualified for the final round of the competition, which will be held on May 6 and 7. The team is looking forward to showcasing their talents and competing against other teams from around the world. The team is currently raising funds to cover the expenses of the trip to Dubai.



Maya Kamat, a computer teacher at Progress High School, is the mentor of the team. She is currently raising funds to cover the expenses of the trip to Dubai. She is looking forward to showcasing the talents of her students and competing against other teams from around the world. The team is currently raising funds to cover the expenses of the trip to Dubai.



The school and the management are trying to raise funds for travel and stay in Dubai for the students and their mentors by crowd-funding.

### DONATE NOW!

#### Bank details

Saraswat Education Society, HDFC Bank, Mapusa-Goa, Account number 50100678046729, IFSC code HDFC0000202

By: 25/04/2024




**"ONE GIRL'S DREAM CAN IGNITE A GENERATION. HELP HER BREAK BOUNDARIES AND INSPIRE COUNTLESS OTHERS."**

# Open Robotics

Organised by engineering colleges, robotics kits are not specified and participants are encouraged to build their own custom robots

---

Happens at the Regional level and National level