

Workshop Content of Soccer Robotic

Objective:

This project-based course is a great sneak-peek into the world of robotics for high school students. By doing it, they will understand the basic building blocks of a robot. With hands-on exercises, they will learn about DC motors, DPDT switches, wireless component, batteries and other components inside wireless controlled robots.

Session 1:

- Introduction to Robotics
- What is Robot - In Depth Explanation
- Various Type of Robots
- Robots Applications in Different Domain
- Future Scope for Robotics
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Session 2:

- What is Soccer Playing Robot?
- Structural Design
- Fix the motors to the clamps
- Chassis Assembly

Session 3:

- RF module Schematic
- Explaining various components on the RF module

SESSION 4:

- How does a Robot move?
- Motors and Motor Drivers IC
- Working of a DC Motor

SESSION 5:

- Connection of Switch to RF Transmitter.
- Connection of motor driver to RF Receiver.
- Motor Connections with motor driver IC.
- How to control a Wireless Robot.

SESSION 6:

- Actuation: Customizing Robots for applications
- Assembly of the Soccer Arm

SESSION 7:

- Troubleshooting
- Testing soccer playing Robot

SESSION 8:

- Competition and Certification distribution