

Maze Solver Robot Course Content

In this course, student will develop a robot that can find its way out from a maze of puzzling lines. The robot moves through the maze arena using infra-red optical sensors. When it detects a junction, the bot intelligently decides the path using a special algorithm. The programming logic is fed into the robot's brain (microcontroller) so that it can reach end point.

Session 1:

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

Session 2:

- Basic Electronics
- Resistor
- Various Type of Robots
- What is a Maze Solver Robot?
- What is a Line Following Robot?
- Sensors used
- Interfacing of Sensors

Session 3:

- Working of a Microcontroller
- Structure of a Microcontroller
- Development Board Schematic
- Explaining various components on Development Board
- Introduction to Embedded c
- Writing first Embedded program

Session 4:

- What is Accelerometer
- Difference between Accelerometer and Gyro Sensor
- Application of Accelerometer
- H-Bridge motor Driver/controller interfacing

Session 5:

- Assembling of the Robotics Kits
- Software Installation

Session 6:

- Assembling Gesture Control Robotics Kit
- Writing and Flashing the code into microcontroller board
- Programming the Robot

Session 7:

- Troubleshooting
- Testing of Maze Controlled Robot

