

Fastest line follower Workshop Course Content

In this course, you will develop 3 different basic autonomous robots which are guided using sensors. The first robot will be a line follower which is programmed to follow a line. This robot detects the path using infra-red sensors which work on the principle of reflection of light. Using the same sensors, you will also develop robots that can avoid/follow obstacles or light.

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:

- How do IR Sensors work?
- What is a Line Following Robot?
- How does a Robot follow the line?
- Test your IR Sensor

Session 3:

- Working of a Microcontroller
- Structure of a Microcontroller
- Development Board Schematic
- Explaining various components on Development Board

Session 4:

- How does a Robot move ?
- Motors and Motor Drivers IC
- Working of a DC Motor
- H-Bridge motor Driver/controller interfacing
- Directional control of the motor

Session 5:

- Assembling of the Robotics Kits
- Software Installation

Session 6:

- Introduction to Embedded C programming languages
- Line Follower Programming Logic
- Designing algorithm for line follower robot
- Write the code for a line follower Robot
- Flashing the code onto the Robot

Session 7:

- Troubleshooting
- Testing of Fastest Line Follower Robot

Session 8:

- Zonal Competition
- Testing of Fastest Line Follower Robot