

Gesture Robotics Workshop Course Content

Techfest is the annual science and technology festival of IIT Bombay. Following is the basic outline of the **in-person** workshop that would be happening at **Techfest in IIT Bombay**.

1. Introduction to Robotics & Open Source Platform
 - Applications and Future Scope
2. Micro-Controllers and its features
 - Overview of Opensource Hardware.
 - Microcontroller Architecture.
 - Atmegain Arduino
 - Arduino Board Layout and Arduino Platform
3. Software Tools
 - Software Installation
 - Getting Started with Arduino IDE
 - How to use the IDE and connect your Board to the Laptop.
 - Write your sample programs.
4. Interfacing of I/O Devices
 - Interfacing a LED
 - Interfacing a Motor
 - Interfacing Analog and Digital Sensors
5. Accelerometers
 - Working of Accelerometers
 - Reading Value of Accelerometer
 - Using XYZ values for Gesture Control
6. Hands-On Sessions
 - LED Patterns
 - Obstacle Avoider Robot
 - Computer Controlled Robot
 - Gesture Controlled Robot