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