ArduinoBotix

Based on Arduino Platform this workshop will cover all the aspects of Autonomous Robotics using Arduino. The students shall complete 4-5 practical activities by the end of two day workshop.

Content:

1. Introduction to Robotics & Open Source Platform
   - Applications and Future Scope

2. Micro – Controllers and its features
   - Overview of Opensource Hardware.
   - Microcontroller Architecture.
   - Atmega in 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. Other Topics
   - ADC
   - Timers and Interrupts

6. Hands-On Sessions
   - LED Patterns
   - Line Following Robot
   - Obstacle Avoider Robot
   - Edge Avoider Robot
   - Wall Following Robot

Kit includes:

Arduino Based Microcontroller board- One
Wheels- Two
Castor Wheels- One
Chassis (Robot Body)- Four Parts
DC Motors- Two
Software and Study Content- One
Connecting Cables- One Bunch
Nuts and Bolts- One Packet
Screw Driver- One
Battery (9V)- Two
IR Sensors- Two
Atmega 168/328- One
Motor Driver IC- One
7805- One
LM324- Two
Motor Driver Board- One

The Faculty:

The faculties are people from top academic institutions, industries and research institutions. They have experience in the industries at the same time had the best education in this field. In fact some of them are pursuing master and Doctorate at Top notch universities to build their knowledge base.

Note: Techfest, IIT Bombay Certificates to all participants (only if participant attends all the sessions).