Internet of Things

DESCRIPTION:

This workshop is based on the concept of Internet of Things. Internet of Things

is a new revolution of the Internet. A world where the real, digital and the virtual

are converging to create smart environments that make energy, transport, cities

and many other areas more intelligent. A device become a smart device is called

IOT. This workshop teaches about wifi module as well as cloud based controlling

of devices. This workshop includes controlling of Devices by sensors and Relays

which makes human life easier and comfortable. Here students will work on

ESP8266 wifi module and Sensors along with Raspberry pi.

microcontroller.

SESSION 1:

- Introduction to Robotics
- Applications of Robotics Technology
- Types of Robots
- Basic Constituents of Robot
- Microcontroller
- Actuators
- Chasis
- Sensors
- Power Supply
- Introduction to Internet of Things
- Applications of Internet of Things

SESSION 2:

- *Robot Assembly

- Installation of Raspberry pi IDE and Driver software
- Interfacing of Microcontroller with Computer
- *Basic Programming of Raspberry pi.
- Interfacing of Motor Driver Board
- Working of Motor driver with Microcontroller
- Interfacing of Wifi Module with Raspberry pi
- AT Commands and Serial Programming
- Controlling LED, Buzzer and Motor using Webpage
- Controlling of LED using Html webpage

SESSION 3:

- Interfacing of LM35 Temperature sensor
- Reading of sensor on Serial monitor
- Account creation for Cloud Server Applications
- Uploading Value of LM35 sensor on Cloud server

SESSION 4:

- Interfacing of LDR and other sensors
- Creating multiple tables and Graphs on Cloud Server
- Uploading Values of sensor on Cloud Server
- Sensor Monitoring using Mobile Phone
- Demo: Home Automation Using Mobile Phone
- Controlling of Live electrical appliances using Mobile Phone

Workshop Benefits and & Highlights:

- Learn & Interact with Engineer Trainer & get to know about
  - Raspberry pi, Bluetooth module
  - Receive an unparalleled education on the art of building robots &
- applications with personal one – on – one attention.
- Learn to make your own robot within 2 days.
- PowerPoint Presentation, Live Demos, Interactive Questions & Answer session & comprehensive material.