

IoT Training

Internet of Things : IOT Syllabus

- Introduction to IoT
- IOT basic concepts
- Architecture of IOT
- How is IoT changing the world
- Applications and industry verticals
- IoT: Characteristics, Enabling Technologies, Technical Scope
- Arduino, Esp8266 , Raspberry Pi
- Board Features – History and Reception
- Hardware Description
- Functional Schematics
- Software and OS Options

Course 1: Practical Electronics & Sensor development

- ✓ Practical working with electronic components
- ✓ Resistor, Capacitor, Diodes, Transistor, Relay
- ✓ Designing of Logic gate and Power supply
- ✓ Development of sensor like light, surface, sound sensor, vibration sensor, temperature sensor, humidity, ultrasonic, infra, Radio, moisture etc.

Course 2: ESE(Embedded System Engineer)

- ✓ Designing of various sensor modules
- ✓ Power supply development
- ✓ Sensor modules interfacing with MCU
- ✓ Display devices & their interfacing with MCU
- ✓ Communication- wireless, wired, PC based
- ✓ IDE's hands on- Keil4, AVRstudio, microC
- ✓ Simulators- Proteus, AVR simulator
- ✓ Working Environment- Linux, windows
- ✓ Project development-as per your requirement
- ✓ Soft Skill Development

Practical's:

- Porting Raspbian Wheezy Linux
- Linux Concepts
- Accessing the command line (terminal and desktop)
- Accessing and using manual pages
- Working with the command line and the shell
- Piping and redirection
- Linux OS
- Linux Commands
- Networking : Wired & Wireless
- File-sharing – Windows, Linux
- GPIO Interfacing
- GPIO's and Hardware Buses – I2C, SPI
- Input devices: Button, Buzzer, Touch, Display
- Sensor Interfacing : Gas sensors, Accelerometer, Display
- Wifi, Bluetooth Interfacing
- Raspberry Pi Camera Module Interfacing
- Applications: Imaging, Video Recording,
- Live video streaming using wi-fi, Video Surveillance
- Audio Video Movie Playback
- Text to speech conversion
- Gaming on the Raspberry Pi 2
- Creating Web server
- Connecting a USB webcam
- Video streaming on the RPi
- Bluetooth Interfacing
- Configuring Wi-Fi Interfacing
- Access the World Wide Web
- Hosting Web Page on Raspberry Pi
- Controlling Motor through Web Server
- Collecting, communicating and leveraging the data from connected devices
- Python Basics and programming
- using python on Raspberry Pi
- Thingier IOT platform
- IOT Dashboard
- Building Web Server Project
- ESP 8266 development platform
- Configuring WiFi ESP8266 module using AT commands
- Uploading data on cloud using WiFi ESP8266 module

- Hands on IBM Bluemix Server
- Nodered Tool for IBM
- IOT Based Application Project
- Mobile application connectivity for IOT

Duration: 1 Month

- Batches : Regular as well as Weekends

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- **fast track Batch option available.**