

IoT | Workshop on Internet of Things using Arduino and RaspberryPi

The Internet of Things (IoT) has spread into most of the businesses in the modern world. It has become an integral and inevitable part of our daily lives. This technique will improve public safety, intelligent tracking in transportation, industrial wireless automation, Machine to Machine communication and personal health monitoring in healthcare with better information and faster communications.

Workshop Highlights

- Open Source Platform
- Easy to learn
- Easy to Debug
- Interfacing I/O devices
- Interfacing External Peripherals

Program Schedule:

09.30 am = Registration

09.45 am = Inaugural Session

10.00 am =Lecture 1(Introduction to IOT)

11.15 am = Tea Break

11.30 am = Lecture 2(Introduction to Arduino and Raspberry Pi)

01.00 pm = Lunch Break

02.00 pm = Practical Demo Session – I (Arduino)

03.15 pm = Tea Break

03.30 Pm = Practical Demo Session –II (Raspberry Pi)



The basic usage of the Arduino environment for creating your own embedded projects at low cost

* **Introduction to the Internet of Things**

- The Internet of Things

* **The Arduino Platform**

- Getting Started
- Exploring the Arduino Board and the IDE
- The Arduino Open-Microcontroller Platform
- Arduino Basics
- Arduino Board Layout & Architecture

Project 1: Simple LED Program for Arduino

Getting to Know the RaspberryPi

- Setting up the RaspberryPi
- Connecting up a display and keyboard to the RaspberryPi
- Connecting up the RaspberryPi to a computer network
- Logging on and passwords
- An introduction to the shell (command line interpreter)
- Exploring the file system - files, directories and permissions
- Creating and removing files and directories
- Connecting to the RaspberryPi from a terminal emulator on Windows
- Connecting to the RaspberryPi from a terminal on Linux
- Exploring Linux command line tools and utilities on the RaspberryPi

Eligibility: There are no prerequisites for joining this workshop. Any one interested, can join this workshop. While a basic C Programming would be helpful, it is not compulsory. Student from Electronics, Electrical, Instrumentation, CS/IT any branch student can attend this workshop.