

# Bluetooth, Vision and Speech Robotics:-

8hours

### Day 1 (Session 1)

#### **Introduction to Microcontrollers**

- Difference between Microcontroller and Microprocessor.
- Microcontroller Architecture and Interfacing.
- How can we use Microcontroller in our Own Circuits?

### **Programming Languages**

- Introduction to Programming Languages- Assembly vs Embedded C.
- Microcontroller Programming using 'Embedded C'.

#### **Basics of Robotics:-**

- Sensors
- Interfacing of Sensors
- Motors and Controlling Circuit
- Interfacing of Motors

#### **Introduction to Programming Languages**

- Programming Languages- Assembly vs Embedded C.
- Microcontroller Programming using 'Embedded C'.

### **Introduction to Wireless System**

- What is Wireless System
- Working of Wireless System
- Different Wireless Modules
- Introduction to Bluetooth Technology
- Working with Bluetooth Module (HC-05)
- Application of Bluetooth Technology in Robotics
- Working of Android App and Robotics.

### **Installation of Software and Debugging**

- Writing your First 'Embedded C' Program
- Program Compilation and Debugging.
- Loading Compiled 'C' Program into Microcontroller.

## Day 2 (Session 1)

### **Android App Development:**

- Basics of Android App Development.
- Software platform to develop the app.
- Make an basic App in .apk format.

### **Motors Interface**

- Motor
- Control of Motors Using Android App

## **Home Automation System:-**

- Relay and Working of Relay Circuits.
- Making of a Bluetooth controlled Home Automation System using Android App

# Day 2 (Session 2)

## Servo Motor Interfacing:-

- Introduction to Servo Motor and its Rotation Angles
- Interfacing of Servo Motor using Mobile App.

## **Robotics and Camera Interface:-**

- How to interface camera remotely using IP address and operate remotely using android phone
- Interfacing camera and record things in monitor
- Make a Spy System.

# **Speech Recognition and Robotics:-**

- Interfacing of Voice Recognition Software with Bluetooth and microcontroller.
- Make a voice assistant controlled System Using Android App.

| Certificate Distribution |
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