

## **Six Sense Course Content**

**Overview:** In this workshop the participants will be told about all the latest technologies that are coming up in the Automation industry and also about controlling of their robots using Image Processing based applications along with basic building of each important module.

### **Day 1**

#### **Session 1:**

- Introduction to Robotics
- Advancements in Robotics & Sixth Sense Technology
- Introduction to Computer vision
- Need of computer vision in industries
- Introduction to basic electronics
- Getting started with microcontrollers

#### **Session 2:**

- Introduction At mega 8
- Introduction to Programming Language
- Programming in microcontrollers
- Compilation and debugging

#### **Session 3:**

- Getting started with computer Vision
- Introduction to MATLAB
- Introduction to Digital Image Processing
- Introduction to Image Processing Tool box

## Day 2

### Session 1:

- Controlling Brightness and Contrast by slider switches in GUI
- Mathematical representation of different types of image.
- Taking snapshot from camera & Conversion into different formats.

### Session 2:

- Blinking of LED
- Burning the program on Hardware with some different LED patterns.
- Rotate the motor in backward and forward Direction.
- Transferring data serially from PC to microcontroller.
- Glowing of LED wirelessly using Bluetooth of Laptop.
- Motor controlling wirelessly using Bluetooth of Laptop.
- Six Sense Robotics

### Session 3:

- Competition
- Certificate Distribution