



# **Sixthsense Robotics**

CONTENT OUTLINE



# **Workshop Content**

#### SESSION 1: Introductory Session

Introduction to Arduino
Introduction to Arduino Hardware Interface
Programming with Latest Arduino Software
Concept of using open-source hardware and software platform

#### SESSION 2: Arduino Interfacing & Sixthsense Botics

Basic Interfacing Using Arduino.
Communication of micro controller and computer
Introduction to SixthSense Botics
Introduction to Vision based robots
Vision Controlled Motion

#### SESSION 3: Image Processing Session

Image Processing
Introduction
Image acquisition devices
Image Processor
Image analysis tools
Machine Control

# SESSION 4: Image Acquisition & MATLAB Session

Image acquisition devices/sensors Digital Camera
Analog Camera
Tools used for Image Processing Hands on
Getting started with MATLAB
Functions
M files
Image Processing

# SESSION 5: Color Sensing Session

Colour spaces
Colour format conversion
Showing and storing of images
Thresholding

#### **EISYSTEMS SERVICES**

FF-113, Express Greens Plaza, Sector 1 Vaishali (Ghaziabad) – Delhi NCR India – 201010



#### SESSION 6: Edge & Motion Sensing Session

Important functions of MATLAB used for colour and edge detection
Video acquisition
Getting information about your webcam and adapters
Setting all the image input parameters
Starting and previewing video
Capturing image and storing image
Getting ahead with image acquisition (Includes specific frame triggering)

## **Prerequisites & Eligibility**

- This is a basic level workshop and however knowledge of C and PHP will be very much helpful.
- The course and curriculum of this workshop is more inclined towards Electronics / Electricals / Computer Science/ Information Technology / Related streams to it however anybody can join this workshop even from different department.
- Mode of Training/Teaching will be English only.

# **Workshop Fees, Dates & Certification**

- Fees: Rs. 1350 per participant.
- Certification from Blitzschlag'19 MNIT Jaipur & ElSystems Services.
- Internship Vouchers by EISystems
- One kit will be provided to a group of 5 participants for workshop duration only.
- Dates: 1<sup>st</sup> & 2<sup>nd</sup> of February 2019
- Venue: MNIT Jaipur



### Contact Us

We ensure that you will find our training programs extremely beneficial for your students. If you have any queries kindly get back to us. We are looking forward to a quick and positive response from you and a long term association with your esteemed organization.

Thanks & Regards,

#### **Mayur Dev Sewak**

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#### Note:

Important: Course & Structure of Workshop may subject to change without any notification to host institution.

In case of any damage in the kit, it will be the responsibility of participant/group to pay Rs. 1800 for the damaged kit and this will be entrusted by college authorities itself.

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