OpenCV Computer Vision with Hands on Application on UAV Drones

There are two very cool things which are on the rise in this era. Unmanned Aerial Vehicles (Drone) which are controlled from a remote place and can even be automated and computer vision which is on the rise and is used for massive surveillance operations. What if we told you that you can get your hands on an actual drone and perform computer vision algorithms in it?? Are you interested?? Then this is your best bet!!

Join this workshop, where you get to work with an actual drone and perform face detection traffic sign detection and many more!!

Agenda:

Day 1 (The Basics of Image Processing):

1) Python Basics.

2) Numpy and matrices processing.

3) Basic operations of an image (Loading and saving an image).

4) Working with videos.

5) Working with pixels.

6) Working with colour channels. (HSV, Greyscale, BGR)

7) Arithmetic and logical operations on images.

8) The logic behind the Surveillance Drone.

Day 2(Take Off):

1) Contours.
2) Haar Cascades.
3) Face detection and sign detection using Haar Cascades.
4) Real Time image processing with UAV Drone.

Requirements:

1) Laptop with Wi-Fi Support (Wi-Fi support is crucial for communicating with Drone).
2) Web camera(Either inbuilt inside laptop or external webcam if inbuilt webcam is unavailable).
3) Pen drive.

Note:

The participants will be provided with codes, materials and the required software to perform image processing and communicate with a drone.

DISCLAIMER:

The participants will be allowed to work with the drone only during the workshop. **The participants will NOT be provided with a takeaway drone and any claim for the ownership of the drone will not be entertained.**