

# Computer Vision for real-time applications using OpenCV and Python

Ever wondered how awesome effects are made in movies with VFX. Wouldn't it be cool if we could make our own Harry Potters cloak of invisibility ? How does Facebook auto tags us? How are traffic violations detected using CCTV's?

The answer is Image Processing. The applications of Image Processing are limitless. Join us to learn how all these cool stuff works through our completely Hands On interactive workshop.

## Agenda:

- 1) Basics of Python.
- 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) Contours.
- 9) Haar Cascades.
- 10) Face detection and sign detection using Haar Cascades.

## Requirements:

- 1) Laptop with camera(Either built in webcam or external webcam)
- 2) Windows operating system.
- 3) Pen drive.

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

## Note:

Participants will be provided with a **Certificate of excellence** on successful completion of problem statement assigned to them after the end of teaching session of the workshop.