

Techno India NJR Institute of Technology, Udaipur

OpenCV (Computer Vision) Training

Training Module

Total Time: 1 Month

Module:

1. Introduction
2. Setting up Environment
 - a. What is Anaconda?
 - b. Installing Anaconda & Setting up Libraries
 - c. Setting up Anaconda in Mac & Linux
 - d. Jupyter Notebook Walkthrough
3. Computer Vision
 - a. What is a Computer Vision & Deep Learning ? Part A
 - b. What is a Computer Vision & Deep Learning? Part B
4. OpenCV
 - a. OpenCV Introduction
 - b. How Image are being Stored & Numpy Introduction
 - c. Reading & writing Images
 - d. Understanding Colour Spaces
 - e. Using Different Colour Spaces
 - f. Drawing in CV2
 - g. Callbacks & Trackbar in CV2
5. Image Manipulation & Processing
 - a. Basic Operations
 - b. Brightening, Darkening
 - c. Geometrical Transformations
 - d. Perspective Transformation vs Affine Transformation
 - e. Smoothing & Sharping Images and Convolutions
 - f. Image Pyramids & Blending Images
 - g. Bitwise Operators & Image Masking
 - h. Image Thresholding

For Techno India Institute of Technology
पंकज पोरवाल
Dr. Pankaj Kumar Porwal
(Principal)

- i. Image Gradients
 - j. Morphological Operators
 - k. Template Matching
 - l. Canny Edge Detector
6. OpenCV Projects
- a. Haar Cascade
 - b. Detecting Cars
 - c. Lane Detection
 - d. Classifying Plant Leaf Images
 - e. Detecting Wheat Heads