Welcome to ineuron.ai


OpenCV using Python

**Description:**

This course will teach the learner the fundamentals of the OpenCV library, including an overview of the library and image manipulation using OpenCV. It is a free and open-source computer vision and machine learning library. This course will introduce learners to the fundamentals of using OpenCV to explore computer vision and AI (AI). With the aid of many practical real-world image processing tasks, students who finish this course will gain hands-on expertise in image processing using OpenCV.

**Start Date:**

**Doubt Clear Time:**

**Course Time:**

**Features:**

# Online Instructor-led learning

# Practical Implementation

# Integrate academic knowledge with the tech

# Real-time Project

# Live Class Recording

# Doubt Clearing

# Assignment in all the Module

# Quiz in every Module

# Career Counselling

# Completion Certificate

**What we learn:**

# Introduction to OpenCV

# Python programming

# Image processing

# Basics of NumPy

# Image Manipulation

# Color spaces

# Projects

**Requirements:**

# Interest to learn

# Dedication

# System with good internet connection

**Instructor:**

**>Introduction:**

>>Course Introduction

>>Course Pre-requisites

>>Who is this course for?

>>What you will get from this course?

>>What is Image Processing?

>>How to get access to course materials?

>>What career path you can follow after completion of this course?

**>Assignment 1:**

>>Explain various fields where image  processing is used and why with example

**>System Setup:**

>>Introducation and Installation on Colab

**>Assignment 2:**

>> Uninstall open-cv and try to install  open-cv-contrib

**>OpenCV overview:**

>>Importing packages

>>Numpy basics

>>Reading/Writing images and videos

>>Argparse introduction

>>Creating script to read image path from cmd  and displaying it

**>Assignment 3:**

>> Read a RBG image in B/W mode and display its height, width and no of channels.

**>Image Basics:**

>>What is pixel?

>>Overview of coordinate system

>>Practical: Manipulating pixels

>>Creating canvas and drawing lines and rectangles

**>Assignment 4:**

>>Draw a bullseye using OpenCV  function.

**>Image processing:**

>>Image translation

>>Image Rotation

>>Image resizing

>>Image Flippng

>>Image Cropping

>>Image Arithmetic

>>Bitwise Operations

>>Image splitting and merging

>>OpenCV colour spaces

>>Smoothing And Blurring

>>Thresholding

**>Assignment 5:**

>>Shift Image up and left using image translation

>>Shift Image up and rotate the image by 25 degrees.

>>Create a function to take input from user for the degree of rotation and final (w,h) of ir

>> Apply the rectangular mask on image show the images values where the mask colou

>>Splitting multiple channels of images into separate images.

>>Convert BGR  to HSV colour space

**>Project Explanation:**

>>Face detection with OpenCV Cascades

>>Virtual Painting

**>Summary:**

>>Course Outro

>>Future Scope of openCV