### 📌 Week 1 Practical -

### Getting Started with Computer Vision (Using OpenCV)

**Instructer : Jaweria Panhwar**

#### 🔹 Step 1: Create Your Project Folder

Name: cv\_practical\_01

Place your image in the folder

Open folder in VS Code

#### 🔹 Step 2: Create Python File

Name: image\_demo.py

#### 🔹 Step 3: Load and Display Image

import cv2

image = cv2.imread('sample.jpg')

cv2.imshow('Original Image', image)

cv2.waitKey(0)

cv2.destroyAllWindows()

#### 🔹 Step 4: Convert to Grayscale

gray = cv2.cvtColor(image, cv2.COLOR\_BGR2GRAY)

cv2.imshow('Grayscale Image', gray)

cv2.waitKey(0)

cv2.destroyAllWindows()

#### 🔹 Step 5: Resize Image

resized = cv2.resize(image, (300, 300))

cv2.imshow('Resized Image', resized)

cv2.waitKey(0)

cv2.destroyAllWindows()

#### 🔹 Step 6: Edge Detection

edges = cv2.Canny(image, 100, 200)

cv2.imshow('Edge Detected Image', edges)

cv2.waitKey(0)

cv2.destroyAllWindows()

#### 🧾 Summary

| **Concept** | **Function Used** |
| --- | --- |
| Load Image | cv2.imread() |
| Display Image | cv2.imshow() |
| Grayscale Conversion | cv2.cvtColor() |
| Resize Image | cv2.resize() |
| Edge Detection | cv2.Canny() |

#### 🎓 Optional Student Task

Load another image and repeat the process.