**Lesson 5: Image Resizing, Cropping, and Flipping**

**🔄 Resize:**

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

**🔪 Crop using NumPy slicing:**

cropped = image[100:300, 200:400]

**🔁 Flip image:**

flipped\_h = cv2.flip(image, 1) # Horizontal

flipped\_v = cv2.flip(image, 0) # Vertical

flipped\_both = cv2.flip(image, -1)

**🔧 Tip: When resizing, maintain aspect ratio to prevent distortion:**

scale\_percent = 50

width = int(image.shape[1] \* scale\_percent / 100)

height = int(image.shape[0] \* scale\_percent / 100)

dim = (width, height)

resized = cv2.resize(image, dim)