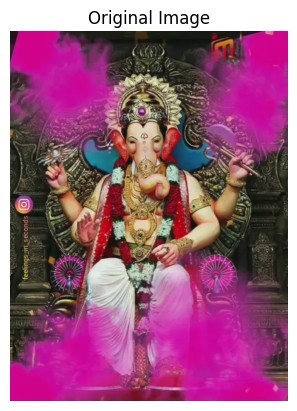
Balram Mandal

Roll No-30

# EXP.NO-10

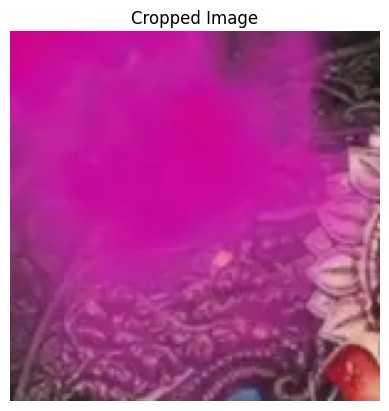
|  |
| --- |
| import numpy as np  import matplotlib.pyplot as plt import cv2  image = cv2.imread('bappa.webp')  image\_rgb = cv2.cvtColor(image, cv2.COLOR\_BGR2RGB)  plt.imshow(image\_rgb) plt.title("Original Image") plt.axis("off") plt.show() |



image\_gray = cv2.cvtColor(image, cv2.COLOR\_BGR2GRAY) plt.imshow(image\_gray, cmap='gray') plt.title("Grayscale Image") plt.axis("off") plt.show()



cropped\_image = image\_rgb[50:200, 50:200] plt.imshow(cropped\_image) plt.title("Cropped Image") plt.axis("off") plt.show()



bright\_image = np.clip(image\_rgb + 50, 0, 255) plt.imshow(bright\_image.astype(np.uint8)) plt.title("Brightened Image") plt.axis("off") plt.show()



sobel\_x = cv2.Sobel(image\_gray, cv2.CV\_64F, 1, 0, ksize=5) sobel\_y = cv2.Sobel(image\_gray, cv2.CV\_64F, 0, 1, ksize=5) edge\_image = np.sqrt(sobel\_x\*\*2 + sobel\_y\*\*2) plt.imshow(edge\_image, cmap='gray') plt.title("Edge Detection") plt.axis("off") plt.show()



cv2.imwrite('modified\_image.jpg', cv2.cvtColor(bright\_image, cv2.COLOR\_RGB2BGR))

True