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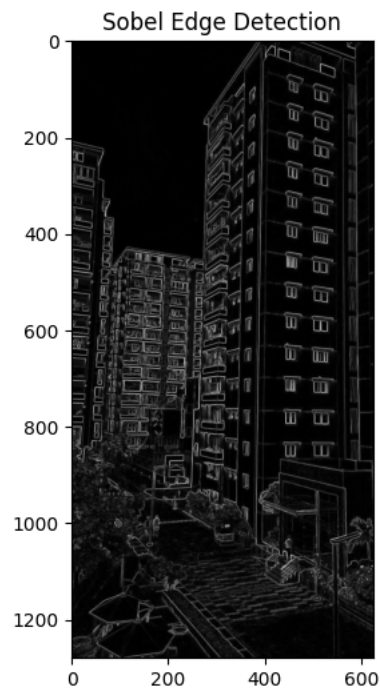
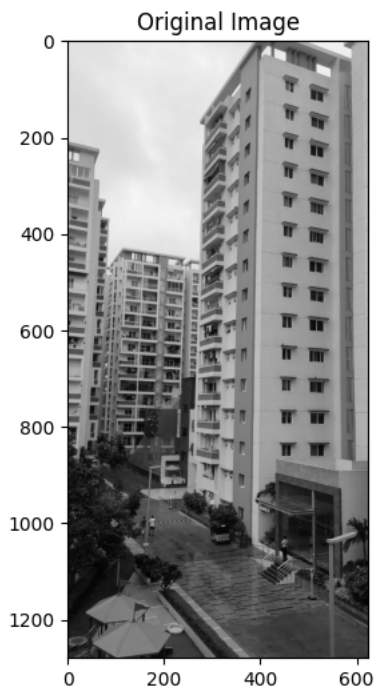
import cv2
import numpy as np
import matplotlib.pyplot as plt

# Load the image
image_path = '/content/drive/MyDrive/CV/image3.jpeg' # Replace with the actual path to your image
original_image = cv2.imread(image_path, cv2.IMREAD_GRAYSCALE)

# Sobel Operator
sobel_x = cv2.Sobel(original_image, cv2.CV_64F, 1, 0, ksize=3)
sobel_y = cv2.Sobel(original_image, cv2.CV_64F, 0, 1, ksize=3)
sobel_combined = np.sqrt(sobel_x**2 + sobel_y**2)

# Display the results
plt.figure(figsize=(12, 6))
plt.subplot(121), plt.imshow(original_image, cmap='gray'), plt.title('Original Image')
plt.subplot(122), plt.imshow(sobel_combined, cmap='gray'), plt.title('Sobel Edge Detection')
plt.show()

```



```

import cv2
import numpy as np
import matplotlib.pyplot as plt

# Load the image
image_path = '/content/drive/MyDrive/CV/image3.jpeg' # Replace with the actual path to your image
original_image = cv2.imread(image_path, cv2.IMREAD_GRAYSCALE)

# Laplacian of Gaussian (LoG)
gaussian_blur = cv2.GaussianBlur(original_image, (5, 5), 0)
laplacian = cv2.Laplacian(gaussian_blur, cv2.CV_64F)

# Display the results
plt.figure(figsize=(12, 6))
plt.subplot(121), plt.imshow(original_image, cmap='gray'), plt.title('Original Image')
plt.subplot(122), plt.imshow(laplacian, cmap='gray'), plt.title('Laplacian of Gaussian')
plt.show()

```

