import cv2

import numpy as np

import matplotlib.pyplot as plt

image = cv2.imread('1.png')

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

kernel = np.array([[0, -1, 0],

[-1, 5, -1],

[0, -1, 0]])

sharpened = cv2.filter2D(image\_gray, -1, kernel)

plt.figure(figsize=(10,5))

plt.subplot(1,2,1), plt.imshow(image\_gray, cmap='gray'), plt.title('Original Grayscale')

plt.subplot(1,2,2), plt.imshow(sharpened, cmap='gray'), plt.title('Sharpened Image (Laplacian)')

plt.show()

output:

