import cv2

import numpy as np

import matplotlib.pyplot as plt

image = cv2.imread('1.png', cv2.IMREAD\_GRAYSCALE)

sobel\_x = cv2.Sobel(image, cv2.CV\_64F, dx=1, dy=0, ksize=3)

sobel\_y = cv2.Sobel(image, cv2.CV\_64F, dx=0, dy=1, ksize=3)

sobel\_combined = cv2.magnitude(sobel\_x, sobel\_y)

sobel\_combined = cv2.convertScaleAbs(sobel\_combined)

plt.figure(figsize=(12,6))

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

plt.subplot(1,2,2), plt.imshow(sobel\_combined, cmap='gray'), plt.title('Sobel XY - All Edges')

plt.show()

output:

