import cv2

import numpy as np

from matplotlib import pyplot as plt

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

\_, binary = cv2.threshold(image, 127, 255, cv2.THRESH\_BINARY)

kernel = np.ones((5, 5), np.uint8)

gradient = cv2.morphologyEx(binary, cv2.MORPH\_GRADIENT, kernel)

cv2.imwrite('9.png', gradient)

plt.figure(figsize=(10, 4))

plt.subplot(1, 2, 1)

plt.title("Original Binary")

plt.imshow(binary, cmap='gray')

plt.axis('off')

plt.subplot(1, 2, 2)

plt.title("Morphological Gradient")

plt.imshow(gradient, cmap='gray')

plt.axis('off')

plt.tight\_layout()

plt.show()

