import cv2 as cv

import numpy as np

from matplotlib import pyplot as plt

img = cv.imread('sudoku.png',0)

img = cv.medianBlur(img,5)

cv.imshow('Original Image',img)

ret,th1 = cv.threshold(img,127,255,cv.THRESH\_BINARY)

th2 = cv.adaptiveThreshold(img,255,cv.ADAPTIVE\_THRESH\_MEAN\_C,\

cv.THRESH\_BINARY,11,2)

th3 = cv.adaptiveThreshold(img,255,cv.ADAPTIVE\_THRESH\_GAUSSIAN\_C,\

cv.THRESH\_BINARY,11,2)

##cv.imshow('Image - Threshold',th3)

titles = ['Original Image', 'Global Thresholding (v =127)',

'Adaptive Mean Thresholding', 'Adaptive Thresholding']

images = [img, th1, th2, th3]

for i in range(4):

plt.subplot(2,2,i+1),plt.imshow(images[i],'gray')

plt.title(titles[i])

plt.xticks([]),plt.yticks([])

plt.show()

cv.waitKey()

cv.destroyAllWindows()