import cv2

import matplotlib.pyplot as plt

import numpy as np

def main():

path = "C:/Users/DELL 3468/Desktop/TY Shit/Python/Image Restoration Tool/Python-OpenCV3-master/Dataset/"

imgpath = path + "Damaged Image.tiff"

img = cv2.imread(imgpath, 1)

img = cv2.cvtColor(img, cv2.COLOR\_BGR2RGB)

height = np.size(img, 0)

width = np.size(img, 1)

createdMask = np.zeros([width, height])

grayimg = cv2.cvtColor(img, cv2.COLOR\_BGR2GRAY)

#temp = np.asarray(PIL.Image.open('test.jpg'))

#for j in grayimg:

# iii = np.asarray([[i[0], i[1]] for i in j])

for i in range(1,width-1):

for j in range(1,height-1):

#ii = iii[i,j]

if grayimg[i,j] > 0:

createdMask[i,j] = 0

else:

createdMask[i,j] = 255

gb\_kernel = cv2.getGaborKernel((21, 21), 8.0, np.pi/4, 10.0, 0.5, 0, ktype=cv2.CV\_32F)

gcreatedMask = cv2.filter2D(createdMask, cv2.CV\_8U, gb\_kernel.transpose())

# saves the merged image to a file

# cv2.imwrite("rgb.jpg", img)

output1 = cv2.inpaint(img, gcreatedMask, 5, cv2.INPAINT\_TELEA)

output2 = cv2.inpaint(img, gcreatedMask, 5, cv2.INPAINT\_NS)

avging = cv2.blur(output1, (10, 10))

gausBlur = cv2.GaussianBlur(output1, (5, 5), 0)

medBlur = cv2.medianBlur(output1, 5)

bilFilter = cv2.bilateralFilter(output1, 9, 75, 75)

output = [img, gcreatedMask, output1, output2, avging, gausBlur, medBlur, bilFilter]

titles = ['Damaged Image', 'Mask', 'TELEA', 'NS', 'avging', 'gausBlur', 'medBlur', 'bilFilter']

for i in range(8):

plt.subplot(4, 4, i + 1)

if i == 1:

plt.imshow(output[i], cmap='gray')

else:

plt.imshow(output[i])

plt.title(titles[i])

plt.xticks([])

plt.yticks([])

plt.show()

if \_\_name\_\_ == "\_\_main\_\_":

main()