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import cv2
import numpy as np
import matplotlib.pyplot as plt
img=cv2.imread('cervix8.png')
cv2.imshow('original cervix image with reflection',img)
hsv_img = cv2.cvtColor(img, cv2.COLOR_BGR2HSV)
cv2.imshow('hsv',hsv_img)
cv2.imshow('saturation',hsv_img[:, :, 1])
h = hsv_img[:, :, 0]
s = hsv_img[:, :, 1]
v = hsv_img[:, :, 2]
retval,threshold=cv2.threshold(s,70,255,cv2.THRESH_BINARY)
mask = cv2.bitwise_not(threshold)
cv2.imshow('masked image',mask)
output1=cv2.inpaint(img,mask,5,cv2.INPAINT_TELEA)
output2=cv2.inpaint(img,mask,5,cv2.INPAINT_NS)
output=[img,mask,output1,output2]
title=['original image','mask','TELEA','NS']
cv2.imshow('op1',output1)
cv2.imshow('op2',output2)
kernel1 = np.array([[[-1,-1,-1], [-1,9,-1], [-1,-1,-1]]])
blur = cv2.bilateralFilter(output1,12,75,75)
kernel = np.ones((150,150),np.float32)/25
dst = cv2.filter2D(output1,-1,kernel)
dst1 = cv2.filter2D(dst,-1,kernel)
dst2= cv2.filter2D(dst1,-1,kernel)
im = cv2.filter2D(dst2, -1, kernel1)
cv2.imshow('image with reflection removed',im)
plt.subplot(3,2,1)
plt.imshow(img)
plt.title('original image')
plt.subplot(3,2,2)
plt.imshow(hsv_img)
plt.title('HSV image')
plt.subplot(3,2,3)
plt.imshow(s)
plt.title('saturation plane image')
plt.subplot(3,2,4)
plt.imshow(mask)
plt.title('mask for image')
plt.subplot(3,2,5)
plt.imshow(output1)
plt.title('telea image')
plt.subplot(3,2,6)
plt.imshow(im)
plt.title('processed final image')
cv2.waitKey(30000)
cv2.destroyAllWindows()

```

Results



