5.Open Source CV pixel operation

For pixel operations, we can change any position to a new pixel color. Here we first read the image, and then assign an area to white.

The code was run on jupyterlab

Code path: /home/pi/Yahboom_Project/1.OpenCV Course/01 Getting Started/04_OpenCV Pixel Operation.ipynb

```
import cv2

img = cv2.imread('yahboom.jpg',1)

(b,g,r) = img[100,100]

print(b,g,r)# bgr

#10 100 --- 110 100

i=j=0

for j in range(1,500):

    img[i,j] = (255,255,255)

    for i in range(1,500):

        img[i,j] = (255,255,255)



#cv2.imshow('image',img)

#cv2.waitKey(0) #1000 ms
```

```
#bgr8 to jpeg format

import enum

import cv2

def bgr8_to_jpeg(value, quality=75):

    return bytes(cv2.imencode('.jpg', value)[1])
```

Use JupyterLab to display before and after image comparison:

```
import ipywidgets.widgets as widgets

image_widget1 = widgets.Image(format='jpg', )
```

```
image_widget2 = widgets.Image(format='jpg', )

\# create a horizontal box container to place the image widget next to each
other

image_container = widgets.HBox([image_widget1, image_widget2])

\# display the container in this cell's output

display(image_container)

img1 = cv2.imread('yahboom.jpg',1)

image_widget1.value = bgr8_to_jpeg(img1) #Original

image_widget2.value = bgr8_to_jpeg(img) #After pixel operation
```