

4.Open Source CV image quality

The code was run on jupyterlab

1. Compression method

```
cv2.imwrite('yahboomTest.jpg', img, [cv2.IMWRITE_JPEG_QUALITY, 50])
```

cv2.CV_IMWRITE_JPEG_QUALITY: Set the image quality of the image format to .jpeg or .jpg, the value is 0---100 (the larger the value, the higher the quality), the default is 95

cv2.CV_IMWRITE_WEBP_QUALITY: Set the image format to .webp format image quality, the value is 0--100

cv2.CV_IMWRITE_PNG_COMPRESSION: Set the compression ratio of .png format, the value is 0--9 (the larger the value, the greater the compression ratio), the default is 3

```
import cv2

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

cv2.imwrite('yahboomTest.jpg', img, [cv2.IMWRITE_JPEG_QUALITY, 50])

#1M 100k 10k 0-100 Lossy compression
```

```
# 1 lossless 2 transparency attribute

import cv2

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

cv2.imwrite('yahboomTest.png', img, [cv2.IMWRITE_PNG_COMPRESSION,0])

# jpg 0 compression ratio higher 0-100 png 0 compression ratio lower 0-9
```

```
#bgr8 to jpeg format

import enum

import cv2

def bgr8_to_jpeg(value, quality=75):

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

```
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('yahboomTest.jpg',1)  
img2 = cv2.imread('yahboomTest.png',1)  
  
image_widget1.value = bgr8_to_jpeg(img1)  
image_widget2.value = bgr8_to_jpeg(img2)
```

