

2. OpenCV image reading and display

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2.1. Image reading

2.2. Image display

2.3. Actual effect display

2.1. Image reading

`img = cv2.imread('yahboom.jpg', 0)` The first parameter is the path of the image, and the second parameter is how to read the image.

`cv2.IMREAD_UNCHANGED`: Keep the original format unchanged, -1;

`cv2.IMREAD_GRAYSCALE`: Read the image in grayscale mode, which can be represented by 0;

`cv2.IMREAD_COLOR`: Read a color image, which can be represented by 1; the default value

`cv2.IMREAD_UNCHANGED`: Read an image and include its alpha channel, which can be represented by 2.

2.2. Image display

`cv.imshow('frame', frame)`: Open a window named frame and display frame data (image/video data)

Parameter meaning:

The first parameter indicates the name of the window to be opened

The second parameter indicates the image to be displayed

2.3. Actual effect display

Code path:

/home/pi/project_demo/06.Open_source_cv_fundamentals_course/A.introduction/Introduction_to_OpenCV/02_OpenCV_Img_Read_Display.ipynb

```
import cv2

img = cv2.imread('yahboom.jpg', 1)
#cv2.imshow('image', img) #This line can only be executed in the command line py
#file, and a video window will pop up
#cv2.waitKey(0) ```python #bgr8 to jpeg format import enum import cv2 def
bgr8_to_jpeg(value, quality=75): return bytes(cv2.imencode('.jpg', value)[1]) ```
```python import ipywidgets.widgets as widgets image_widget =
widgets.Image(format='jpg', width=800, height =800) display(image_widget)
image_widget.value = bgr8_to_jpeg(img) ``` ![] (o2.png)
```

