13.USB camera display

1.Camera reading

capture=cv.VideoCapture(0)

Parameter meaning:

The parameter in VideoCapture() is 0, which means opening the laptop's built-in camera. If the parameter is the video file path, the video will be opened, such as cap = cv2.VideoCapture("../test.avi")

2.Display camera video

ret,img = frame.read()

Return value meaning:

ret：ret is a bool value to determine whether the correct frame is read back.

img：image data of each frame

3.Code and actual effect display

Program path：/home/jetson/Dofbot/5.AI_Visual/0.Camera Driver Tutorial.ipynb

Main code:

```python
import cv2
import ipywidgets.widgets as widgets
import threading
import time

image_widget = widgets.Image(format='jpeg', width=600, height=500)  #Set up the
camera display component
display(image_widget)                                               #Show camera
components
```

```python
#bgr8 to jpeg format
import enum
import cv2

def bgr8_to_jpeg(value, quality=75):
    return bytes(cv2.imencode('.jpg', value)[1])
```

```python
image = cv2.VideoCapture(0,cv2.CAP_V4L2)                    #open camera
ret, frame = image.read()
image_widget.value = bgr8_to_jpeg(frame)
```

After the code block is run, the picture captured by the USB camera can be displayed.