Camera display

1. Camera read

capture=cv.VideoCapture(0)

Parameter meaning:

The parameter in VideoCapture() is 0, which means opening the USB camera.

If you need to check the camera device number, please enter the following command:

```
ls /dev/video*
```

2, display camera video

ret,img = frame.read()

Return value meaning:

ret: ret is a bool value, which determines whether the correct frame is read back

img: image data of each frame

3. Code and actual effect display

Program path:

```
~/home/jetson/dofbot_pro/dofbot_basic_visual/scripts/01.Camera_Demo.ipynb
```

Main code:

```
import cv2
import ipywidgets.widgets as widgets
import time
from dofbot_utils.fps import FPS #Display camera component
```

```
#bgr8 to jpeg format #bgr8 to jpeg format
def bgr8_to_jpeg(value, quality=75):
 return bytes(cv2.imencode('.jpg', value)[1])
```

```
#Set up camera display components #Set up camera display components
image_widget = widgets.Image(format='jpeg', width=600, height=500)
fps = FPS()
cap = cv2.VideoCapture(0)

width=640
height=480
cap.set(cv2.CAP_PROP_FRAME_WIDTH, width)
cap.set(cv2.CAP_PROP_FRAME_HEIGHT, height)

print("Camera state:", cap.isOpened())
```

```
# 显示摄像头组件 #Display camera assembly
display(image_widget)
try:
    while cap.isOpened():
        ret, frame = cap.read()
        fps.update_fps()
        fps.show_fps(frame)
        image_widget.value = bgr8_to_jpeg(frame)
        time.sleep(0.01)
except KeyboardInterrupt:
    print(" Program closed! ")
    pass
```

```
#release
#释放
cap.release()
```

Click the Run All Code Blocks on the toolbar and drag to the bottom to display the image captured by the USB camera.

If you need to end the program, please click the Stop button on the toolbar.