27. Watershed segmentation algorithm

27.1、Use

Source code launch file path: /opt/ros/noetic/share/opencv_apps/launch

Step 1: Start the camera

```
roslaunch ascam_visual opencv_apps.launch img_flip:=false
```

- img_flip parameter: whether the image needs to be flipped horizontally, the default is false.

The [usb_cam-test.launch] file opens the [web_video_server] node by default, and you can directly use the [IP:8080] web page to view the image in real time.

Step 2: Start the watershed segmentation function of Opencv_apps

```
roslaunch opencv_apps watershed_segmentation.launch # Watershed segmentation algorithm
```

Each function case will have a parameter [debug_view], Boolean type, whether to use Opencv to display the image, the default is displayed.

If you don't need to display, set it to [False], for example

```
roslaunch opencv_apps watershed_segmentation.launch debug_view:=False
```

However, after starting in this way, some cases may not be displayed in other ways, because in the source code, some [debug_view] is set to [False], which will turn off image processing.

27.2, Display method

- rqt_image_view

Enter the following command and select the corresponding topic

```
rqt_image_view
```

- opencv

The system displays by default, and no processing is required.

- Web viewing

(Under the same LAN) Enter IP+port in the browser, for example:

```
192.168.2.116:8080
```

For specific IP, use your current virtual machine IP.

27.3, Effect display method