

## 8、harris corner detection

Corner points are widely used in image processing, such as image matching (FPM feature point matching), camera calibration, etc. The basic idea of the algorithm is to use a fixed window to slide in any direction on the image, and compare the two situations before and after sliding, the degree of change in pixel grayscale in the window, If there is sliding in any direction and there is a large grayscale change, then we can think that there is a corner point in the window.

### 8.1、使用

Source code launch file path: `~/jetcobot_ws/src/opencv_apps/launch`

Step 1: Start the camera

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

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

Step 2: Start the corner detection function of Opencv\_apps

```
roslaunch opencv_apps corner_harris.launch # harris corner detection
```

Each functional case will have a parameter `[debug_view]`, Boolean type, whether to use Opencv to display images, which is displayed by default.

If no display is required, set it to `[False]`, for example

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

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

### 8.2、Display method

- `rqt_image_view`

Enter the following command to select the corresponding topic

```
rqt_image_view
```

- `opencv`

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

### 8.3、 Effect display

You can see that the camera will mark the corners of the captured image.

