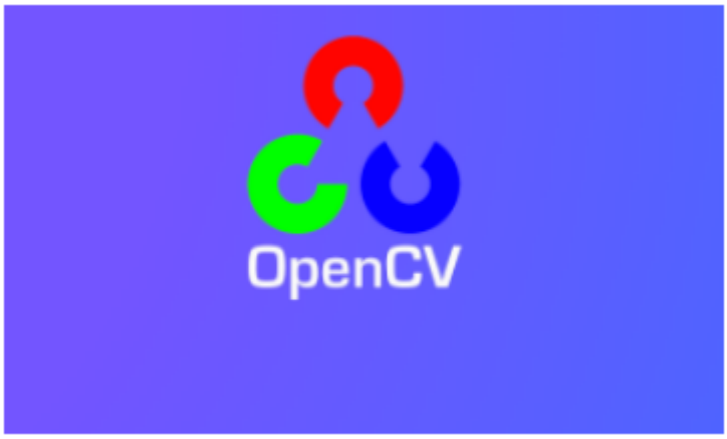
1. Introduction to Open Source CV



What is OpenCV? Its full name is Open source Computer Vision Library, an open source computer vision library. As shown in the picture above, what we see is the OpenCV logo. We can see three small circles made of distinct R, G, and B colors. Composition, that is to say, it is a set of open source API function libraries about computer vision. This also means:

(1) Whether it is scientific research or commercial application, it can be used for development;

(2) The source code of all API functions is public, and you can see the program steps of its internal implementation;

(3) You can modify the source code of OpenCV and compile and generate the specific API functions you need.

The image processing on the Raspberry Pi motherboard uses certain functions of the OpenCV function library, or it can be said that it is inseparable from its existence in most image processing design fields. It has been used in intrusion detection many years ago. , specific target tracking, target detection, face detection, face recognition, face tracking and other fields, OpenCV can be said to show its talents, and these are just the tip of the iceberg of its applications. Now that we realize that OpenCV is so universal, in this chapter we will introduce you to some very basic image processing functions that we use in our courses, as well as some universal functions. Here we first have a general understanding of this knowledge. After a while, there are color recognition and face recognition AI advanced projects to teach you how to get started. However, the powerful application functions provided by OpenCV are far more than this. If you are interested in the development of Opencv computer vision library and want to learn more about it, the following are provided Here are several websites for your reference, research and study:

OpenCV official homepage: https://www.opencv.org

OpenCV Chinese Forum: http://www.opencv.org.cn

OpenCV CSDN Forum: https://bbs.csdn.net/forums/OpenCV