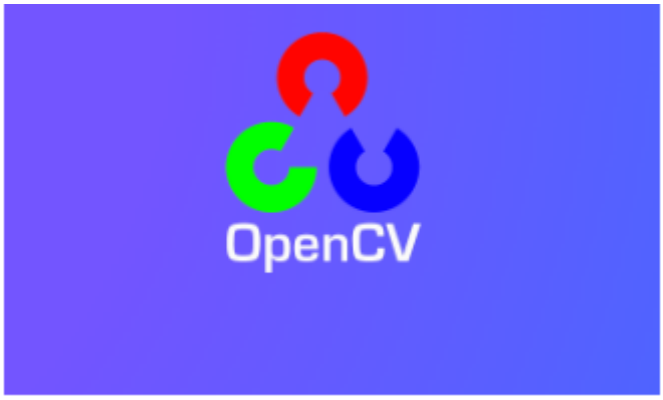
# 1.Introduction to Open Source CV




What is OpenCV? Its full name is Open source Computer Vision Library, open source computer vision library.As shown in the picture above, what we see is the OpenCV logo. We can see that it consists of three small rings in the three distinct primary colors of R, G, and B.In other words, 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.

Image processing on ROSMASTER 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.As early as many years ago, OpenCV has been showing its talents in the fields of intrusion detection, specific target tracking, target detection, face detection, face recognition, face tracking, etc., and these are just the tip of the iceberg of its applications. Since we realize that OpenCV is so versatile, 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, and then there are two practical projects on color recognition and tracking, and face recognition and tracking 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 Opencv computer vision library development and want to learn more about it, here are several websites for your reference 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