

Aim: Practice with Python modules.

In today's lab, you will be practicing on the OpenCV module. OpenCV is a library, which you can use its functions in real-time computer vision studies. With this module, you can detect objects, faces, gestures and even track motion...

1. Your first task is to open a new project and add/import OpenCV module to this project.
2. Next, you will get a colorful JPEG image. You can either find it online or took a photo with your phone and use it. More colors you have in it, better will be your result.
3. Now, a colored image consists of 3 main color channels: Blue, Green and Red. And an image can be represented by putting 3 matrices that representing these channels on top of each other.
4. Your task is to utilize OpenCV functions and divide your image into these channels. You may have to do some research.
5. After dividing it, find a way to show them on the screen.
6. The colors can be edited by changing the values of a color channel. Make a change so that only red and blue colors exist in your image. (Don't forget, channels are matrices with values ranging 0-255, do something that won't go beyond or lower)
7. Lastly, combine your image back again and show it on the screen to observe, if you have completed your task successfully.