Lesson 2 Build OpenCV Environment

1. Install Numpy

Each picture involves several pixels, which results in that a large number of arrays need to be processed in the program. Numpy is a extension library for Python, which handles multi-dimensional arrays more efficiently than Python's native array structures. Besides, it can improve the readability of codes.

Open command line terminal and then input command "**pip install numpy**" to install Numpy. For more information about Numpy, please move to the folder "**3.Python->Python Basic and Advanced Learning->Lesson 13 Python Numpy Basic Operation**".

```
ubuntu@ubuntu-virtual-machine:~$ pip install numpy
```

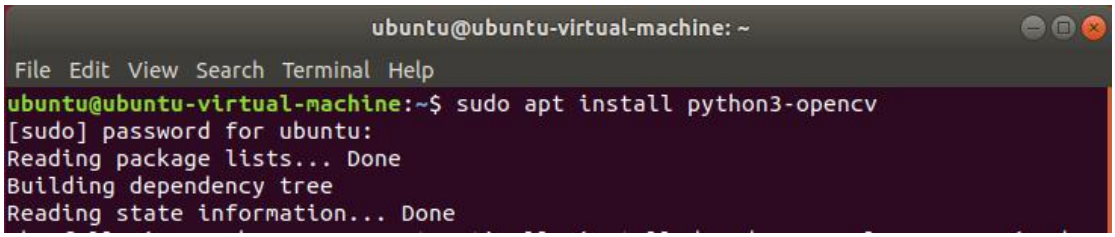
2. Install OpenCV

OpenCV package can be obtained from Ubuntu repository. Then refresh the packages index and install the OpenCV package by typing the following commands.

1) sudo apt update: refresh the packages index

```
ubuntu@ubuntu-virtual-machine:~$ sudo apt update
```

2) sudo apt install python3-opencv: Install the package. During installation, input "y" to continue the execution and the complete installation may take 10s.



3. Verify the Installation of OpenCV

We can import cv2 module to print the version of OpenCV so as to verify whether the installation is successful or not.

1) python3: enter Python

2) import cv2: import cv2 module

3) cv2.__version__: check the version

If the version of OpenCV is printed, the installation is successful.