Installing OpenCV 4 with Python 3.6 in Linux Mint

This tutorial assumes a fresh install of Linux Mint, although it should work fine with existing installations too.

The instructions were largely taken from [pyimagesearch.com](https://www.pyimagesearch.com/2018/08/15/how-to-install-opencv-4-on-ubuntu/), although with some modifications.

Finally, any line beginning with a ‘$’ symbol is a command to be entered into the terminal window. This command should not include the ‘$’ when it is entered.

# Install OpenCV Dependencies

$ sudo apt-get update

$ sudo apt-get upgrade

$ sudo apt-get install build-essential unzip cmake git pkg-config

$ sudo apt-get install libjpeg-dev libpng-dev libtiff-dev

$ sudo apt-get install libavcodec-dev libavformat-dev libswscale-dev libv4l-dev libxvidcore-dev libx264-dev

$ sudo apt-get install libgtk-3-dev

$ sudo apt-get install libatlas-base-dev gfortran

$ sudo apt-get install python3-dev python3-pip

$ pip3 install numpy

$ pip3 install filterpy

# Download Repositories for OpenCV and OpenCV Extra Modules

At the time of writing, OpenCV Version 4.1.0 was the latest version available. It should be fine to use whatever the most recent version of OpenCV is, however. Just be sure to checkout the same version for both the ‘opencv’ and ‘opencv\_contrib’ repositories.

$ cd ~

$ git clone https://github.com/opencv/opencv.git

$ cd opencv

$ git checkout 4.1.0

$ cd ~

$ git clone https://github.com/opencv/opencv\_contrib.git

$ cd opencv\_contrib

$ git checkout 4.1.0

# Build and Install OpenCV

If you have chosen to download the git repositories into somewhere other than your home directory, take care to update the path given for the `-D OPENCV\_EXTRA\_MODULES\_PATH` argument.

When it comes to running the `make` command, modify the `-j4` flag to whatever number of processors is available on your computer or virtual machine. This will optimise the number of processes used to build OpenCV.

$ cd ~/opencv

$ mkdir build

$ cd build

$ cmake -D CMAKE\_BUILD\_TYPE=RELEASE \

-D CMAKE\_INSTALL\_PREFIX=/usr/local \

-D INSTALL\_C\_EXAMPLES=OFF \

-D INSTALL\_PYTHON\_EXAMPLES=ON \

-D OPENCV\_EXTRA\_MODULES\_PATH=~/opencv\_contrib/modules \

-D PYTHON\_EXECUTABLE=/usr/bin/python3 \

-D OPENCV\_GENERATE\_PKGCONFIG=YES \

-D BUILD\_EXAMPLES=ON ..

$ make -j4

$ sudo make install

$ sudo ldconfig

After running `make install`, it is possible to delete the ‘opencv/build’ directory, which will save a approximately 5GB of space on your system. Note that there are some resources in this directory that are useful for later (such as pre-trained classifiers for facial recognition), and so holding onto this directory might prove useful later on, although it can be easily downloaded later if that is necessary.

# Confirm the OpenCV Installation

Much like how the ‘$’ is the terminal prompt for the terminal, the triple angle bracket, ‘>>>’ is the prompt for the Python command line. After importing cv2 and running the ‘cv2.\_\_version\_\_’ command, the version number should match the version number of the repository you downloaded.

$ python3

>>> import cv2

>>> cv2.\_\_version\_\_

'4.1.0'