

Install OpenCV using Python on Raspberry Pi:

1. `sudo apt-get update`
2. `sudo apt-get upgrade`
3. `sudo apt-get install build-essential cmake pkg-config`
4. `sudo apt-get install libjpeg-dev libtiff5-dev libjasper-dev libpng12-dev`
5. `sudo apt-get install libavcodec-dev libavformat-dev libswscale-dev libv4l-dev`
6. `sudo apt-get install libxvidcore-dev libx264-dev`
7. `sudo apt-get install libgtk2.0-dev`
8. `sudo apt-get install libatlas-base-dev gfortran`
9. `sudo apt-get install python2.7-dev python3-dev`
10. `cd ~`
11. `wget -O opencv.zip https://github.com/Itseez/opencv/archive/3.1.0.zip`
12. `unzip opencv_contrib.zip`
13. `wget https://bootstrap.pypa.io/get-pip.py`
14. `sudo python get-pip.py`
15. `sudo pip install virtualenv virtualenvwrapper`
16. `sudo rm -rf ~/.cache/pip`
17. `export WORKON_HOME=$HOME/.virtualenvs`
18. `source /usr/local/bin/virtualenvwrapper.sh`
19. `echo -e "\n# virtualenv and virtualenvwrapper" >> ~/.profile`
20. `echo "export WORKON_HOME=$HOME/.virtualenvs" >> ~/.profile`
21. `workon cv`
22. `pip install numpy`
23. `workon cv`

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24.cd ~/opencv-3.1.0/

25.mkdir build

26.cd build

27.cmake -D CMAKE_BUILD_TYPE=RELEASE \

>> ~/.profile

-D CMAKE_INSTALL_PREFIX=/usr/local \

-D INSTALL_PYTHON_EXAMPLES=ON \

-D OPENCV_EXTRA_MODULES_PATH=~/opencv_contrib-3.1.0/modules \

-D BUILD_EXAMPLES=ON ..

28.make -j4

29.make clean

30.make

31.sudo make install

32.sudo ldconfig

33.ls -l /usr/local/lib/python2.7/site-packages/

34.cd ~/.virtualenvs/cv/lib/python2.7/site-packages/

35.ln -s /usr/local/lib/python2.7/site-packages/cv2.so cv2.so

36.source ~/.profile

37.workon cv

38.python

>>> import cv2

>>> cv2.

'3.1.0'

version

4rm -rf opencv-3.1.0 opencv_contrib-3.1.0
```