

CENG 391 Introduction to Image Understanding

October 06, 2016

OpenCV Installation and Setup

If you would like to setup OpenCV on your own computer, you should download necessary packages, OpenCV and OpenCV_contrib ***BEFORE LAB SECTION (October 06, 2016)***.

You can download necessary packages with the following commands:

- `sudo apt-get install build-essential`
- `sudo apt-get install cmake git libgtk2.0-dev pkg-config libavcodec-dev libavformat-dev libswscale-dev`
- `sudo apt-get install python-dev python-numpy libtbb2 libtbb-dev libjpeg-dev libpng-dev libtiff-dev libjasper-dev libdc1394-22-dev`

OpenCV and OpenCV_contrib should be downloaded from git repository as follows:

- **OpenCV:** `git clone https://github.com/opencv/opencv.git`
- **OpenCV_contrib:** `git clone https://github.com/opencv/opencv_contrib.git`

Installation Steps:

1. `cd ~/opencv`
2. `mkdir release`

3. `cd release/`
4. `cmake -D CMAKE_BUILD_TYPE=RELEASE -D CMAKE_INSTALL_PREFIX=/usr/local ..`
5. `make -j4`
6. `sudo make install`
7. `cd ..`
8. `mkdir build`
9. `cd build/`
10. `cmake -D CMAKE_BUILD_TYPE=Release -D OPENCV_EXTRA_MODULES_PATH=<path to opencv contrib/modules> CMAKE_INSTALL_PREFIX=/usr/local ..`
11. `make -j4`
12. `sudo make install`

Useful Links:

- [*https://github.com/opencv*](https://github.com/opencv)
- [*http://docs.opencv.org/trunk/d7/d9f/tutorial_linux_install.html*](http://docs.opencv.org/trunk/d7/d9f/tutorial_linux_install.html)
- [*http://docs.opencv.org/3.1.0/*](http://docs.opencv.org/3.1.0/)
- [*https://cmake.org/cmake-tutorial/*](https://cmake.org/cmake-tutorial/)
- [*https://docs.python.org/2.7/tutorial/*](https://docs.python.org/2.7/tutorial/)
- [*http://www.cplusplus.com/doc/tutorial/*](http://www.cplusplus.com/doc/tutorial/)