

Install Software for ECE387

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Abstract

This will show you how to install the software for the class. We will install python 2.7, windoze compiler, OpenCV for python, and a bunch of python modules that will be used in the class.

1 Install

1.1 Git-Bash

1. Grab the git-bash package from git-scm.com and install it
2. From this folder, grab .bash_profile (note it has "." on the front so it is a hidden file) and drop it in your home folder
 1. My home folder, for example, is: C:/Users/Kevin.Walchko
3. Now to open a bash window, you can double click on the git-bash icon on your desktop or from the start menu: All Programs -> Git -> Git Bash

1.2 Python

1. Grab the python package from the software folder (or download from www.python.org)
 2. You should have an python-2.7.13.amd64.msi, run that and install the software to your C: drive
 3. Now install
 4. Open a bash window
 5. Run: `pip install -U pip setuptools wheel` to update your software
- Python 2.7
 - python-2.7 installer
 - VCForPython27: it is a cpp compiler to build wheels
 - Python 3.6
 - python-3.6 installer
 - vs_buildtools: it is a cpp compiler to build wheels

1.3 OpenCV 3.2

1. Download OpenCV 3.2 from Sourceforge. Your browser should put it in your Downloads folder. If it goes else where, then adjust the instructions below.
 1. Alternatively you can get it from the **software** folder, grab **cv2.pyd**
2. Grab the opencv library (**cv2.pyd**) and put it into your python library
 1. from: C:\Users\<your username>\Downloads\opencv\build\python\2.7\x64\cv2.pyd
 2. to: C:\Python27\Lib\site-packages
3. Now test:
 1. open a bash window
 2. run `python`

3. type: `import cv2`
4. if there are no errors ... you are good!

1.4 Jupyter Notebooks

1. Go to the software folder and install `VCForPython27.msi`. This will install the microsoft compiler so you can build python libraries in wheel format
2. Run `pip install -U numpy jupyter opencvutils matplotlib`
3. Open a bash window
4. Run `jupyter notebook` and a webpage should open up. From there you can create or navigate to jupyter notebooks and open them

1.5 Other Python Libraries

1. Run `pip install -U pycreate2 ar_markers future sparklines pyserial`