

# 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](http://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`