ECON 628-01

REQUIRED TOOLS FOR CLASS

INSTALL

- **Anaconda** - We will be using Anaconda as our primary development environment => see below for more on Anaconda.
- **Python 2.7** - This is installed by default on most Macs and also comes with Anaconda.
  Anaconda and Python:
    - Follow the installation instructions for Python 2.7 for your computer. (e.g. "MacInstall). Note: There is a Python 3, which has significant differences from 2.7 and is not "industry standard." We will be using Python 2.7.
    - Mac only: Test that Anaconda and Python were installed correctly by opening a Terminal window and entering ipython notebook In a few moments, your browser should open to a window titled Jupyter. If this works, you may close window, and shutdown the notebook server.
    - If your installation is not complete or you have questions about it, please ask for help to your classmates, TA or instructor.

- **Github** - We'll be using Github on a daily basis to store and share our code.
- **Git** (mac) / **Git Bash** (pc) - Students should install command line tools for Git.
- **Atom** or **Sublime** - Popular text editors for writing code.

COMMON TOOLS

- **Anaconda** bundles many of the Python packages we'll be using, including:
    - *Python 2.7*: The most widely used, stable, enterprise version of Python.
    - *Ipython / Jupyter / Pandas*: Required tools for creating notebooks.
    - *Matplotlib*: The king of all python plotting packages.
    - *Gensim*: A framework for vector modeling.
    - *NLTK* & *Spacy*: Used for natural language processing.
    - *NumPy*: Fundamental array processing tool.
    - *Scikit-learn*: Modules for machine learning & data modeling.
    - *SciPy*: Scientific library for python.
    - *Seaborn*: Statistical data visualizer.
    - *Pip* & *Setuptools*: package installer & version manager (Mac only).
    - *Sqlite*: Standalone, lightweight SQL database engine.
    - *Statsmodels*: Simple statistical computation (used with SciPy).

HARDWARE SPECIFICATIONS

Follow the guidelines below to ensure your machine is fully prepared:

Mac Users

We will be teaching the course using Macs, and we strongly recommend students use a Mac with OS X 10.11 ("El Capitan") in order to run all of the programs necessary for the course. *This rules out some older MacBooks.*

If in doubt, compare your machine against the following hardware requirements:

- *1.6GHz dual-core Intel Core i5 processor*
- *Turbo Boost up to 2.7GHz*
- *Intel HD Graphics 6000*
- *8GB RAM*
- *128GB flash storage*
- *10+ GB of free disk space*

PC Users

While you can be great at using python with *any* machine, unfortunately, there are a number of compatibility issues with Python libraries and older versions of Windows. For example, Python and Anaconda users have identified multiple issues with *Windows 7 x64* machines.

We **strongly recommend** that PC users adopt the latest version of Windows ("Windows 10"). PC users on older machines may consider installing a Virtual Machine like Oracle's Virtualbox and running Anaconda in a Linux environment via Ubuntu Desktop. See more information here.

Please note that we will be conducting the course using Macs, and may not be able to help PC or Linux users troubleshoot any issues you might encounter. If you choose to use a PC or Linux machine, ***you will need to provide your own IT support*.