Session Notes

Prerequisites

Anaconda installation

- All code assumes Python 2.7
- Anaconda installation give 300+ libraries and a package installation and maintenance

Download installer for your environment, Anaconda runs on Windows, Mac OS and Linux.

https://www.continuum.io/downloads

Using jupyter/iPython notebooks

- Extract/Download session files
- Open command prompt or terminal/shell window
- Go to session folder `cd <session directory>`
    - `dir` or `ls` should show `code data extra time figures SessionNotes.md SessionNotes.pdf`
- Run jupyter/iPython `jupyter notebook`
- If Anaconda is installed correctly and jupyter is in your path:
    - Start-up messages should appear in the terminal window
    - Your default browser should start with something like `http://localhost:8888/`
    - Check logs on screen and firewalls etc if this does not happen
- Using a notebook allows code and documentation to be combined.
- To run the code in each cell either click the play button on the jupyter toolbar or press Shift-Enter.
- The cells in these notebooks are either code or Markdown. To see the Markdown code double click the cell.
- Code cells can be re-run as often as you wish, this allows for you to make changes and see the results.

Running the notebooks

- Click on the code folder
- In the code folder the exercises are numbered click on each one in turn
- Session 01 jupyter notebooks
- Sessions 2-6 Python basics
    - Assignment
    - Flow Control
    - Data Structures
    - Functions
    - Modules
- Session 07 NumPy

- Session 08 Matplotlib
- Session 09 Pandas
    - Part 1
    - Part 2
- Session 10 Supervised Machine Learning - scikit learn
- The `extra time` folder (at the same level as `code`) is a folder for extra work

jupyter/iPython keyboard shortcuts

https://ipython.org/ipython-doc/1/interactive/notebook.html#keyboard-shortcuts

https://www.cheatography.com/weidadeyue/cheat-sheets/jupyter-notebook/

Other Links

http://scipy.org

http://www.numpy.org

https://plot.ly/python/ipython-notebook-tutorial/

http://pandas.pydata.org/pandas-docs/stable/index.html

http://www.labri.fr/perso/nrougier/teaching/matplotlib/#simple-plot

http://nbviewer.ipython.org/github/ipython/ipython/blob/1.x/examples/notebooks/Cell%20Magics.ipynb

http://www.scipy.org/scipylib/index.html

http://matplotlib.org/resources/index.html#books-chapters-and-articles

Useful commands

- ? - IPython's features
- %quickref - Quick reference Card
- help - Python help
- object? - details about an object