Setup jupyter notebooks

We will use jupyter notebooks, a great format for interactive learning and coding. The notebooks run in the browser and combine website content (text, images, etc.) with executable code. The easiest way to get everything you need is to install the python distribution Anaconda:

1. Download Anaconda with **Python 2.7** (*not 3.X*) from https://www.continuum.io/downloads

Anaconda comes with most packages required for scientific computing, but it is worth checking. We need at least the following packages: numpy, scipy, pandas, matplotlib, seaborn. Run the command below for these packages (conda will tell you if it's already installed).

2. To install missing packages, open a console and run: `conda install packagename`

Note: If conda cannot find a package you can also use: `pip install packagename`

Load the notebooks

3. Download the files here: https://github.com/da-bu/ath2017.git

Open a console and navigate to that folder.

4. Run the notebook server with: `jupyter notebook`

This should open a browser window with jupyter home opened at your current path. In this window, open one of the notebooks and run the first code cell: Click on the cell with the import statements (see figure below) and press ctrl+enter. You should not get any errors. If you get a "UserWarning" you can ignore it.

```
In [ ]: %load_ext autoreload
        %matplotlib inline
        from IPython.core.display import display, HTML
        display(HTML(open('css/notebook.html').read()))
        import numpy as np
        import pandas as pd
        import matplotlib.pyplot as plt
        import seaborn as sns
```

A notebook cell with python code. Click on it and press ctrl+enter to execute the code in this cell.

Get started

Do not execute any further code in the notebooks; we will explore this during the session. If you are not used to Python, it is worthwhile to familiarise yourself with some of the basics. Here are a few resources:

Jupyter notebook basics

Python and numpy basics (make sure to read the numpy indexing section)