MOD510: Useful Python resources

Oddbjørn Nødland

Aug 20, 2019

Abstract

This short note provides examples of the many useful Python resources available on the web. It is recommended to focus on the aspects of Python programming that are most relevant for computational science purposes. In particular, you should practice working with a) lists and (especially) NumPy arrays, b) functions, and c) plotting graphs.

Mandatory assignments will be handed in as Jupyter notebooks, so you should quickly become familiar with those.

0.1 Official Python documentation

A natural place to start would be the tutorial found at the pages with official Python documentation. Note that there are different versions of the Python programming language. It is recommended to use one of the most recent Python 3 versions, as there are quite a few differences between Python 2 and Python 3. Also, the former will not be mainainted for very long.

0.2 Scientific libraries

You should also become acquainted with the official documentation for frequently used scientific Python libraries, such as matplotlib (used for plotting), NumPy, and SciPy. Depending on your needs, checking out Pandas could also be very worthwhile.

0.3 Useful links (mostly notebooks)

Below is a list of links that may prove helpful as you work with the course:

- data-science-ipython-notebooks by Donne Martin
- A gallery of interesting Jupyter Notebooks
- Python Resources at UC Berkeley
- Introduction to programming for geoscientists

0.4 Online communities

A final tip: If you have a practical question during one of your programming sessions, odds are that someone at Stack Overflow (or some similar online community) will know the answer. It is greatly recommended to check out these websites, and you will most likely also be guided there if you google stuff.