

Python Workshop

Day 1 – Introduction to Python

Morning Session: Getting to know Python

Introduction to Python (and Spyder)

Python data types (different type of numbers, Strings, Lists, Dicts, etc.)

String manipulation

Functions, classes, and beyond.

Afternoon Session: A Pythonic workflow

Introduction to shell scripts and Stanford Farmshare

Read/Write files with Python

Optional references

The Python Tutorial:

<https://docs.python.org/2/tutorial/>

Google Python class online

<https://developers.google.com/edu/python/>

Stanford Farmshare wiki:

https://web.stanford.edu/group/farmshare/cgi-bin/wiki/index.php/Main_Page

Stanford Practical Unix

<https://practicalunix.org/>

Day 2 – Web Scraping

Morning Session: Introduction to web scraping

Understanding web pages (html) and the server/client model

Reading web pages into Python

Extract meaningful data with Beautiful Soup

Afternoon Session: Advanced topics

Dynamically loaded web pages

APIs

Best practices

Optional references

Documentation for Requests:

<http://docs.python-requests.org/en/latest/>

Beautiful Soup website:

https://web.stanford.edu/group/farmshare/cgi-bin/wiki/index.php/Main_Page

Required software

Anaconda Python Distribution

Download and install from <https://store.continuum.io/cshop/anaconda/> (free)

Any python distribution should work, if you have one that you prefer. If not, Anaconda is highly recommended.

X server

OS X – Download and install the most recent version of XQuartz from:

<http://xquartz.macosforge.org/landing/>

Windows – There are multiple options for Windows users, but MobaXterm is recommended:

<http://mobaxterm.mobatek.net/>