Setting-up your environment

This document will give you ressources to set up your python environment for this course.

In case the following python commands does not yield any error, you are all set-up for the course and can skip the rest of this document:

```
import numpy
import pandas
import matplotlib
import seaborn
print('OK')
```

The first part covers python installation. In case you already have python installed on your machine, feel free to skip that part.

The second part covers the installation of third-party libraries you will use in this course.

1. installing python

We will be installing python using Anaconda, an open-source python distribution that bundles python3 along with a large number of useful python modules such as SciPy, NumPy, or Pandas.

Anaconda is cross-plateform and available for both Windows and UNIX (Linux, MacOS) operating systems.

It also bundles other useful software such as the conda package manager (which allows easy installation of bioinformatics software) and Jupyter Notebook.

To install anaconda:

1. go to https://www.anaconda.com/products/individual.
2. download the version of anaconda matching your operating system.
3. follow the installer's instructions.

To test whether your installation is working, try to launch Jupyter Notebook:

- UNIX: open a terminal and type jupyter-notebook.
- Windows: in the start menu, search for "Jupyter Notebook (Anaconda)" and start the application.

Launching the application should open a new tab in your default web-browser with the Jupyter Notebook launch page. From there you can browse your computer for existing notebooks (.ipynb files), or you can click on new > Python3 to open a new empty notebook.

Jupyter Notebook is an open-source application that runs locally in your web-browser and allows you to create documents that contain both code, text annotations (in Markdown), and images. You do not have to use jupyter notebooks to follow this course, however this is a well recognized tool for data-analysis in python and we recommend its use.

You can get a feeling for jupyter notebooks from various tutorials on the web.

2. installing the third party libraries

Anaconda comes bundled with all of the modules we will need during this course, so if you installed python with anaconda you should not have to install anything else.

However, if you installed python by another mean, here is where to find installation instructions :

- numpy : https://numpy.org/install/
- matplotlib : https://matplotlib.org/users/installing.html
- pandas : https://pandas.pydata.org/getting_started.html
- seaborn : https://seaborn.pydata.org/installing.html

Try the code given at the top of this document to verify that the libraries were all installed properly.