Guide To Python 3 and Jupyter Notebooks

Models, Algorithms and Data (MAD): Introduction to computing

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FS20

1 Python

Python is one of the most used programming language and is a fast and flexible way to get started with coding. There exists many distributions and many editors and IDE (Integrated Development Environment) to code in Python. In this course, for ease of use and compatibility across all operation systems we will use Anaconda for Python installation and Jupyter Notebooks for coding the exercises. *If you are already familiar with Python and Jupyter Notebooks and/or if you already have a Python distribution installed on your computer feel free to use it. Anaconda is only one way to make it work.*

2 Anaconda

In order to install Anaconda go to the following link. Make sure to download the **Python 3.7** version.

https://www.anaconda.com/distribution/

Follow the Anaconda installation guide. *You do not need to install the Pycharm IDE*

Windows: https://docs.anaconda.com/anaconda/install/windows/
MAC OS: https://docs.anaconda.com/anaconda/install/mac-os/
LINUX: https://docs.anaconda.com/anaconda/install/linux/

Anaconda has a graphical interface: **Anaconda Navigator** and a command line interface: **Anaconda Prompt**. For this course you only need to use the simpler graphical interface and Jupyter Notebooks. *However your are encouraged to explore the command line interface and the other IDE as they are valuable programming tools.* You can get started using Anaconda following this guide

https://docs.anaconda.com/anaconda/user-guide/getting-started/

3 Jupyter Notebook

The Jupyter Notebook is an open-source web application that allows you to create and share documents that contain live code, equations, visualizations and narrative text. In this course we will use Notebooks to share coding exercises. Notebooks run on your computer but are accessed via a web-browser. You can open Jupyter Notebook via the Anaconda Navigator. To get started with Jupyter Notebooks you can download Notebook 1.0 from the course's web page. We recommend you save all Notebooks and solutions in the same folder. Then open Juypter from the Anaconda Navigator and navigate to your Notebook folder. Double click on `Notebook1.0_Intro.ipynb` to launch the introductory Notebook.