

Python Workshop - ANU (CBE)

Setup and Installation

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These notes are available here:

<https://github.com/mmcky/anu.python-cbephd.june-2017>

Note: The version number for Anaconda has been updated since this guide was put together. The current version is **4.4.0**

Why Python?

Python is:

1. free
2. a full programming environment
3. easier to learn than some other languages
4. has a large package library
5. has a large community
6. ...

Provides a powerful environment for scientific research and computation.

Python 2.7 or 3.5?

Python 2.7

- Pro
 - More packages are available in Python 2.7
 - A lot of examples are written in Python 2.7 syntax.
- Con
 - In maintenance mode - not getting new features as the language develops over time.

Python 3.5+ (Best **default** selection)

- Pro
 - Newest version which is the long term future of Python
 - Most of the scientific stack has been ported to Python 3
- Con
 - Sometimes want to use a library which has not been migrated to Python 3 yet. (but can make use of conda environments if needed)

Best way to Learn Programming?

The best way to learn is through practice ...

Start with small programs and then move onto larger applications.

This process is time consuming – but it can also be fun!

Installation Guides

The following installation guides are available for:

1. Linux¹
2. OS X
3. Windows

on the Github site:

<https://github.com/mmcky/anu.python-cbephd.june-2017>.

¹Ubuntu and its derivatives are the most commonly. Linux Mint is used in the installation guide.

Jupyter

Jupyter is an excellent interactive environment in the Data Science community

Learn more **here**

Jupyter Demo

Some simple tests

Run these commands in a terminal.

1. Try updating conda by typing: `conda update conda`
2. Try updating the anaconda library by typing:
`conda update anaconda`
3. Open IPython Notebook by typing: `jupyter notebook`. Open a new notebook and try out a few python examples
4. Install QuantEcon library by typing in a terminal:
`pip install quantecon`. Next open an Jupyter notebook and try importing the library using: `import quantecon as qe` in one of the code blocks

Note: For Windows systems these should be run in a cmd or powershell terminal.