Python Refresher

Empirical Industrial Organization

Andras Niedermayer[1]

[1]Department of Economics (THEMA), Cergy Paris Université

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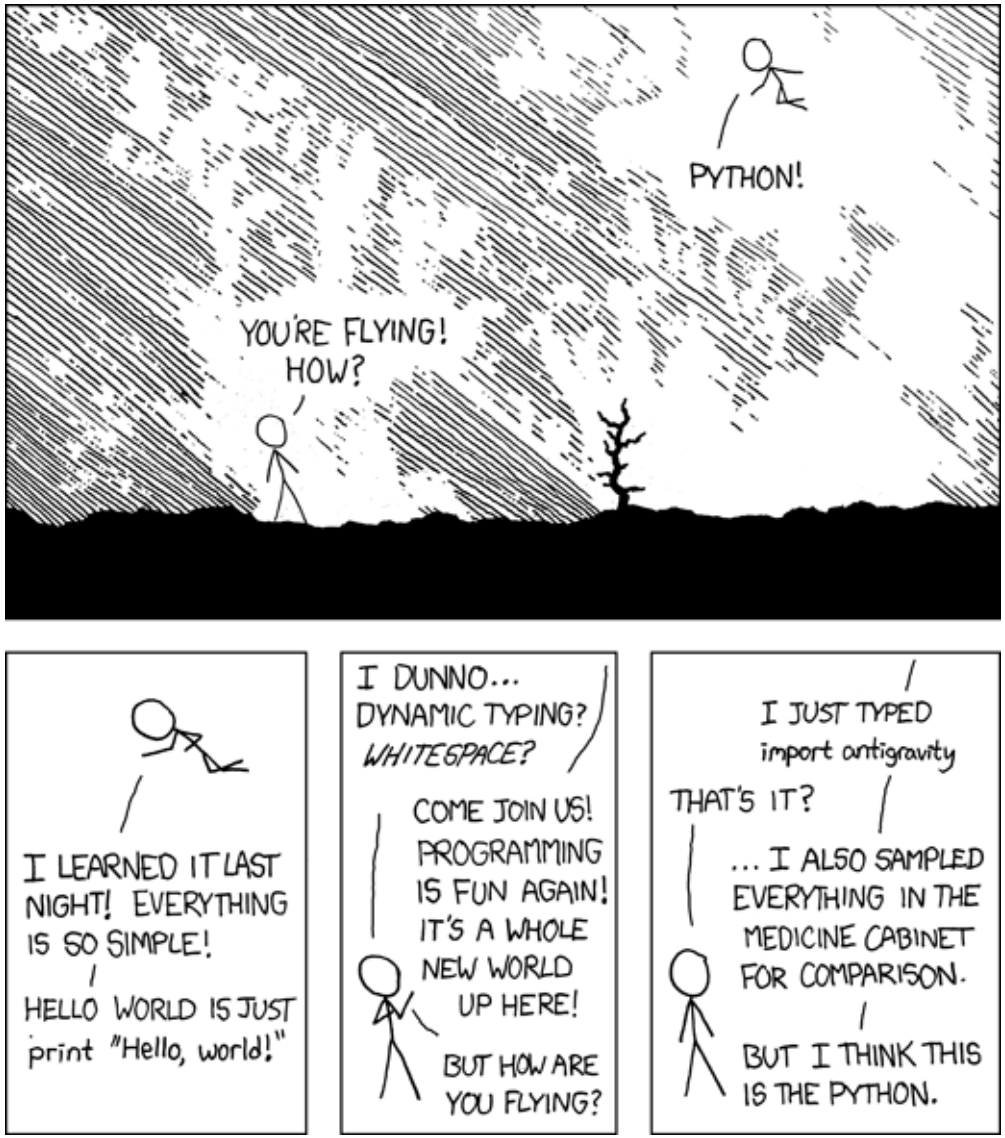
Python

- Python is the most popular language for (big) data analysis both in academia and industry, see e.g. `http://pypl.github.io/PYPL.html`
- interactive data analytics: immediate feedback and intuitive data processing in Jupyter notebooks (and also IPython console and interpreters in various Integrated Development environments)

Python

- powerful libraries



Python

- Open source: free, powerful, and a very dynamic community to develop new packages
- Cross-platform: for Windows, OS X, and Linux
- Intuitive language: Closest to mathematical language and pseudocode
- Dynamically typed: One does not need to declare variable types statically (in new versions of Python one can optionally declare the types of variables, which is an advantage in large code bases, but this is outside of the scope of this lecture)

Python Installation

- for initial lectures: run code online in Jupyter notebooks on Sargent and Stachurski's website: `https://python.quantecon.org/index_postgrad.html`
  - click on "Launch notebook" to run a notebook
  - run the code
  - you can edit the code and rerun it
  - to save the code, you need a Google account
- you can create you own online Jupyter notebooks on Google Colaboratory `https://colab.research.google.com/`
- for later lecture, it's easier to run you code locally, so please install Anaconda Python 3.9 on your laptops, `https://www.anaconda.com/distribution/`

Python Basics

- we will start with Python basics
- work through the notebooks on `https://python-programming.quantecon.org/intro.html`
- solve the exercises at the end of the notebooks

Scientific Libraries for Python

- next we will look at the scientific libraries for Python
- work through the notebooks on `https://python-programming.quantecon.org/need_for_speed.html`
- solve the exercises at the end of the notebooks