Python bootcamps (EUR)

This Git repository contains the Jupyter notebooks (to be) used for the workshops "Basic Lab Skills for Research Computing" at the Erasmus University Rotterdam.

At present we are working on three workshops:

- CLI, MarkDown, LaTeX, Pandoc, Git, CSV, textanalysis, intro Jupyter notebooks
- Python programming: Basics, textanalysis (NLTK, Spacy), data (Pandas)
- SQL: SQLite, Google's BigQuery

Methodology

Basically, there exist two ways to address the lack of "computer literacy" in academia. Teach students and teachers some tricks, together with the use of some libraries, to get the results they are looking for. Or, take a more fundamental approach: Teach programming as a problem solving technique, using pseudo-code, diagrams, and notation, based on sound software engineering principles (Touretzky, Etter).

We have chosen the latter approach. The reasoning behind this choice is simple. Even workshops based upon this approach will not succeed in delivering full-fledged programmers and what participants will get out of the workshops will differ amongst them. But the bottomline will be that they have become better problem solvers and that they have seen the tools to successfully communicate with programmers: pseudo-code and notation.

Instruments used

- command line interface
- unix toolbox
- Git
- Anaconda Python distribution (Python 3.7)
- Jupyter Notebooks

Goals

- Understand that, in an academic context, it is important to be able to read, use and re-use code.
- Modular, comprehensible, re-usable and testable all come together.

- Solving problems with the computer can be fun; working together on solving these problems doubles the fun.
- Solving these problems should be based upon sound engineering principles.

Content

Workshop 1

Workshop 2

Workshop 3