



2018-04-15, 14:00, Input Session

Python 101 - Data processing with Python
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Hackathons

- Hackathons are not usually about one language or technology
- More about: ideas, exchange, collaboration and experimentation

Impressions

- great way to meet curious people
- opportunity to peek into unknown technologies
- awareness, inspiration
- escape work, also: do better work (or worse, sometimes worse is better)
- Python works well for prototyping

Python

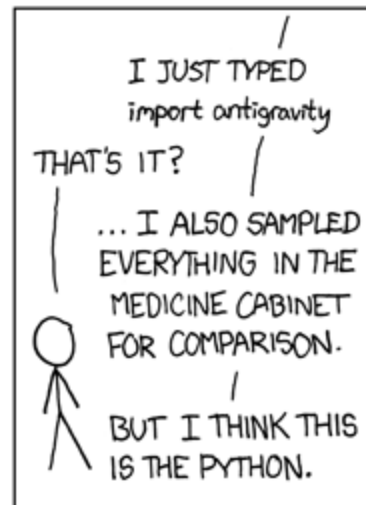
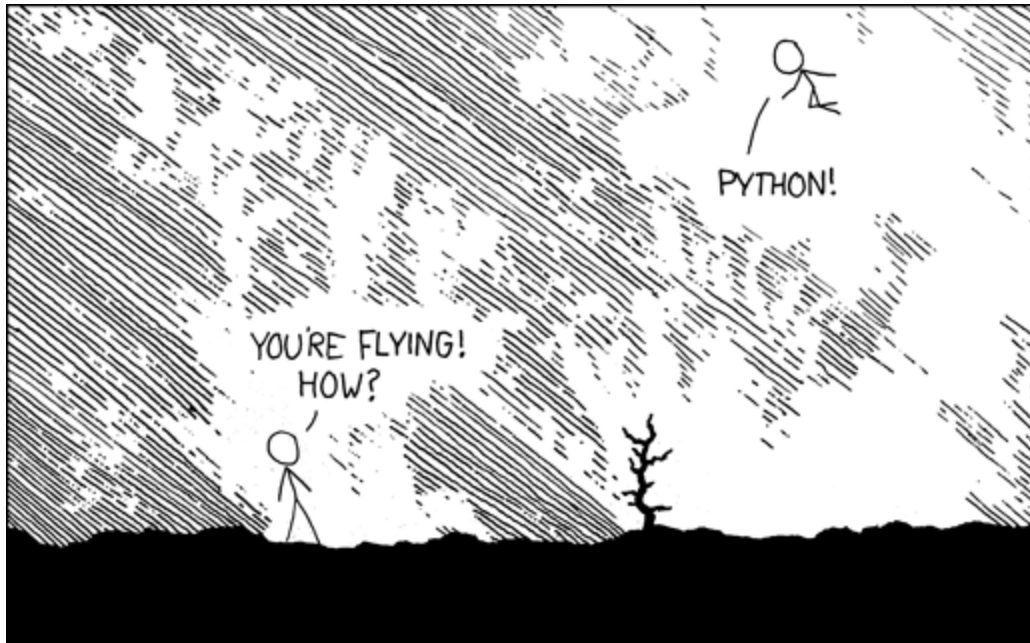
- Python is a nice (if you like whitespace), lightweight language
- Python 0.9: February 20, 1991
- Python 3.6.4: December 19, 2017
- In top 5 of [Tiobe Index](#), alongside Java and
- an active, heterogeneous community

Python hard facts

How many lines of code does it take to ...?

- build a web application: 6
- iterate over XML RSS feed items: 3
- parse a URL into a programmable spreadsheet: 1
- state of the art deep learning object detection in images: 16

xkcd.com/353



Now for real

Let's look at ways to access, inspect, transform, analyze and present data.

Jupyter Notebooks

- CDV18 datasets
- Working with XML
- RSS feeds
- OAI harvesting
- CSV and Excel files
- Python and Art

TODO

Datasets:

- look at example data sets and apis

Where to try Python:

- repl.it

Beautiful Python:

- a [few one liners](#), 8 queens, ...
- mixed typed arrays, multi paradigm
- list comprehensions, generators

Packages:

- one notebook per package, 5 minutes, 10 packages

