Introduction to Python

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Why python?

- Growth in the number of users

  https://stackoverflow.blog/2017/09/06/incredible-growth-python/

- Big community of users in scientific research community which means

  good popular library.

- Easy to code, fast to deploy.
- Easy to read.
- Can be used to do other things (web scraping, backend of a website)

The Basics

- hello world.py, hello world2.py
- data_structures.py
- control_flow.py
- high performance container: https://docs.python.org/2/library/collections.html
- Multiple processing: https://docs.python.org/3/library/itertools.html
- Itertools: https://docs.python.org/3/library/itertools.html
- Google Style Guide: https://google.github.io/styleguide/pyguide.html

Numpy, scipy, Pandas, scikit-learn

- basic statistics with numpy and scipy
- Doing reproducible research with jupyter notebook (similar to

  Rmarkdown)

- Working with tabular data using pandas
- Machine Learning in Python: scikit-learn