STRINGFEST ANALYTICS

PYTHON FOR EXCEL USERS

George Mount

Data Analyst & Educator at Stringfest Analytics

George works as an independent analyst and data analytics educator with the goal to help clients manage their data so they think more creatively. He serves as a technical expert and lead curriculum developer for Thinkful's data analytics program and is the instructor of the DataCamp course "Survey and Measure Development in R."

George blogs about data, innovation, and career development at georgejmount.com. He holds a master's degree in information systems with a certificate of achievement in quantitative methods from Case Western Reserve University

WELCOME

- Where are you from?
- What interests you about Python?
- What have you coded before?

COURSE OBJECTIVES

- Load, view and write spreadsheet files from Python
- Perform common data wrangling tasks such as sorting, filtering, and aggregation
- Navigate and execute code in Jupyter notebooks
- Identify, install and implement useful packages for your needs
- Not panicking

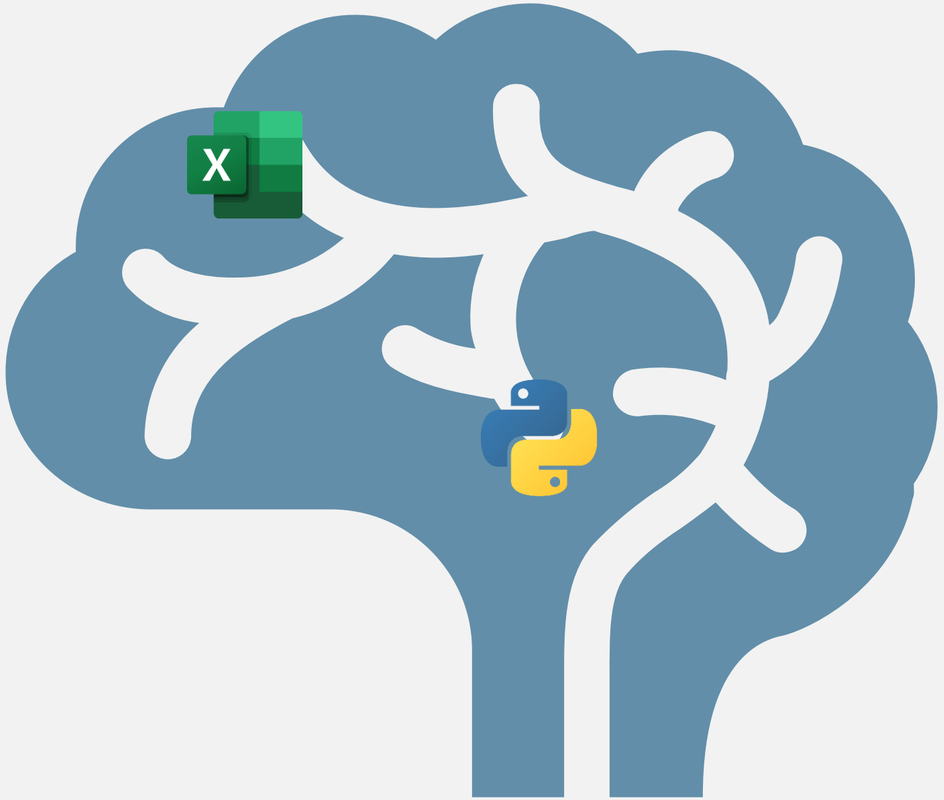
FOLLOWING ALONG

- Each section is a sub-folder
- Demos = follow along with me
- Drills = try it yourself
  - Jupyter notebooks: fill-in-the-blanks, compare to solutions

WHY LEARN THIS WAY?

“Students learn new ideas by relating them to what they already know, and then transferring them into their long-term memory.”

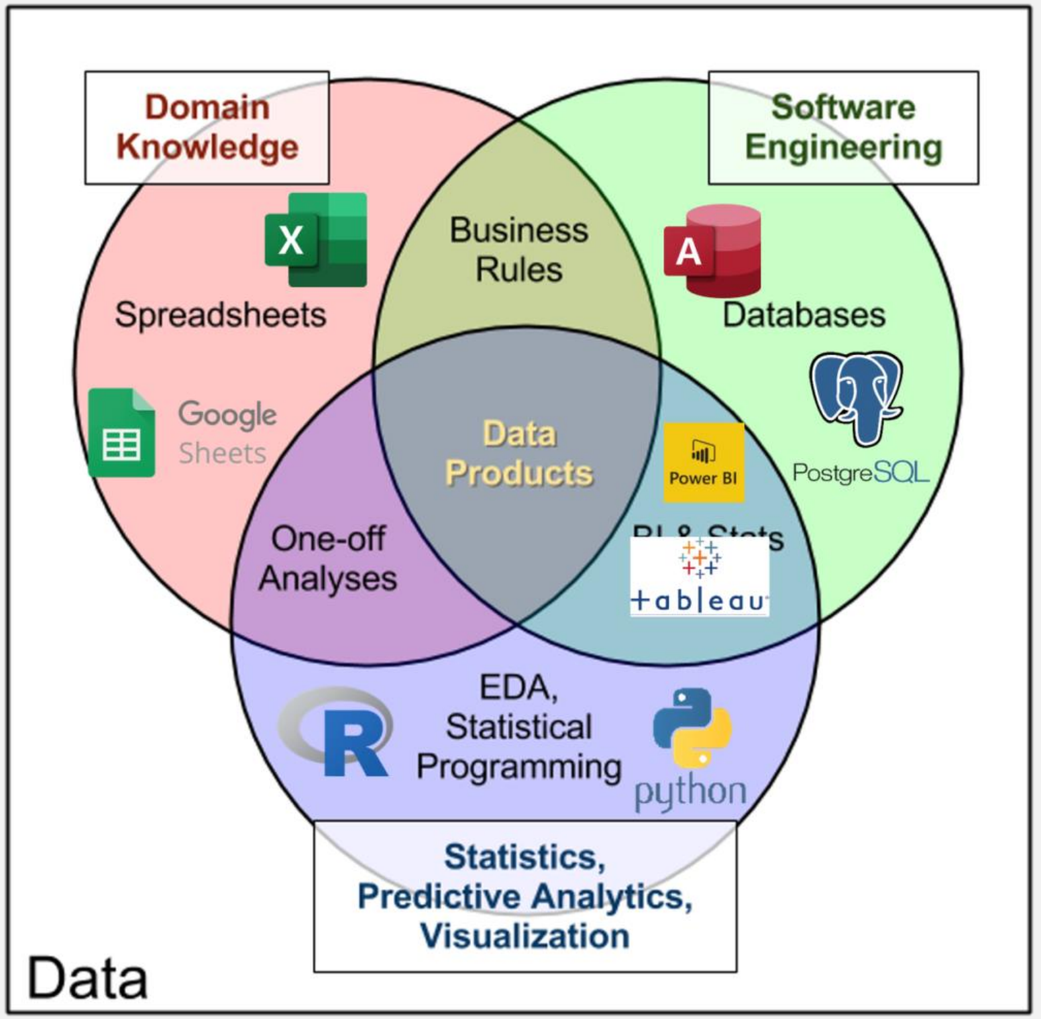
-- Paul Bruno, “How People Learn: An Evidence-Based Approach”



1. UP AND RUNNING FROM SPREADSHEETS TO PYTHON

PYTHON & EXCEL: “YES, AND” DATA ANALYSIS

THE DATA ANALYTICS STACK



http://www.datacommunitydc.org/blog/2013/09/the-data-products-venn-diagram

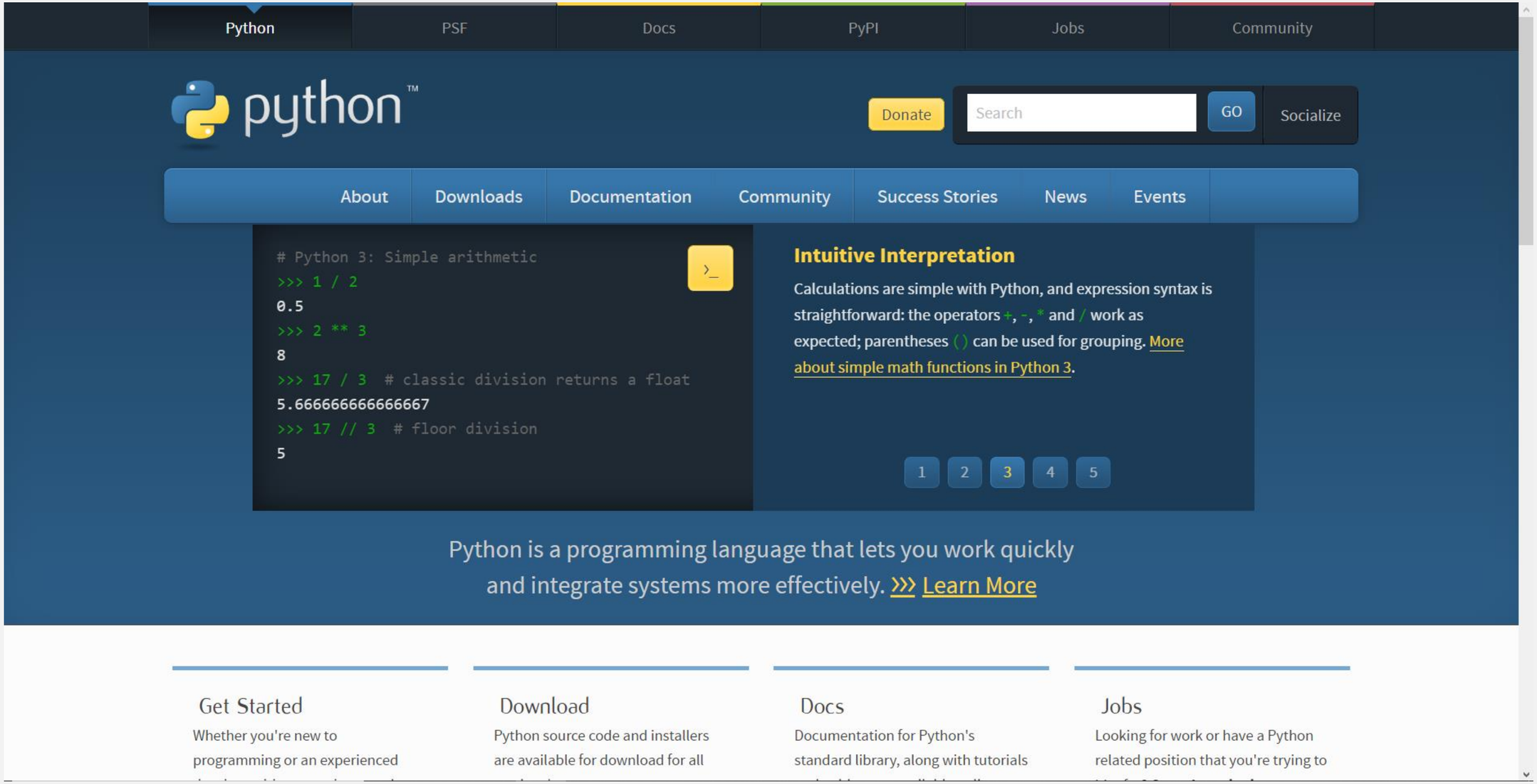
PYTHON IS:

- A programming language
- Open-source

PYTHON IS NOT:

- A spreadsheet
- A database
- Commercially supported

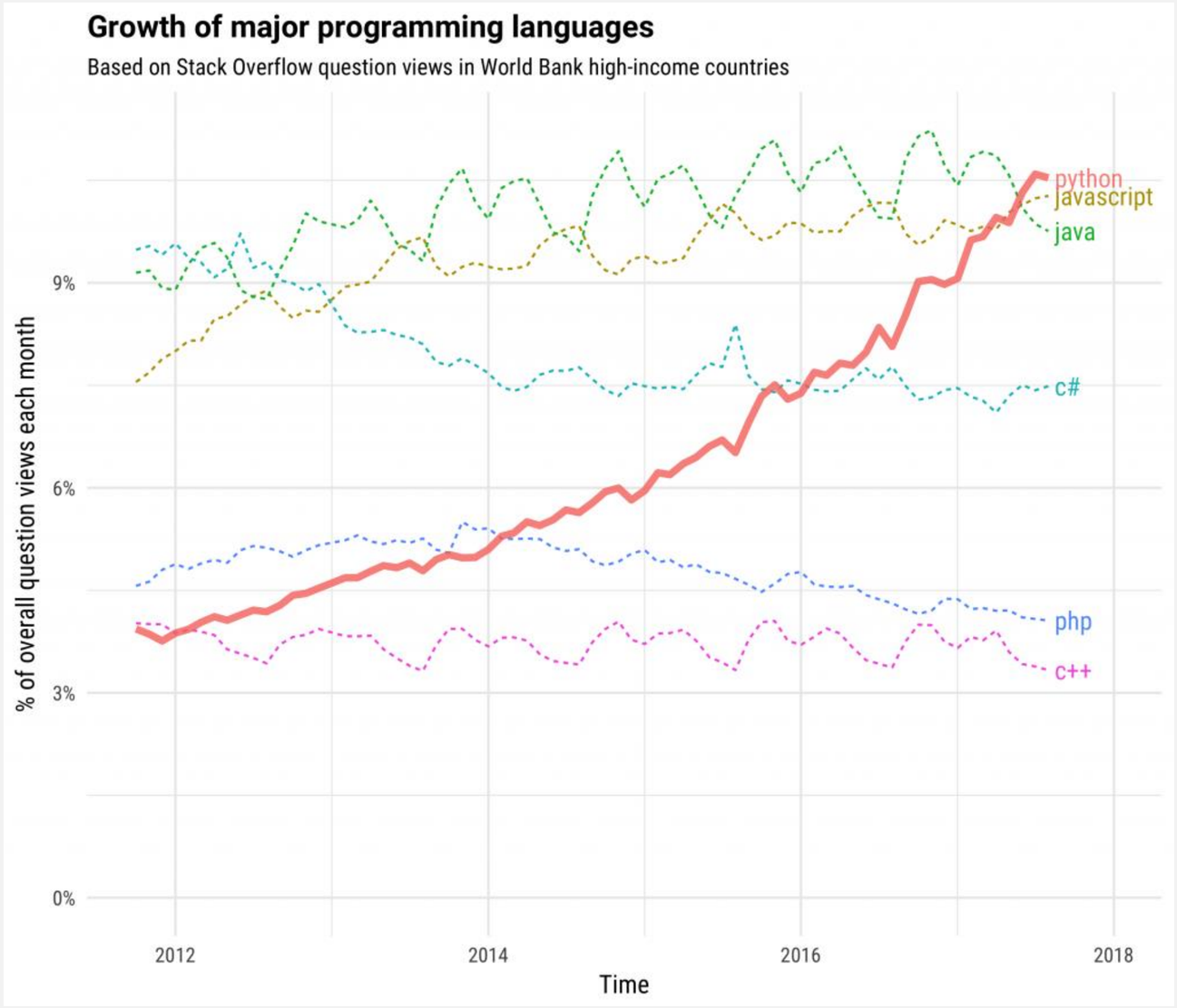
WHERE DOES PYTHON COME FROM?



https://www.python.org

ADVANTAGES OF PYTHON:

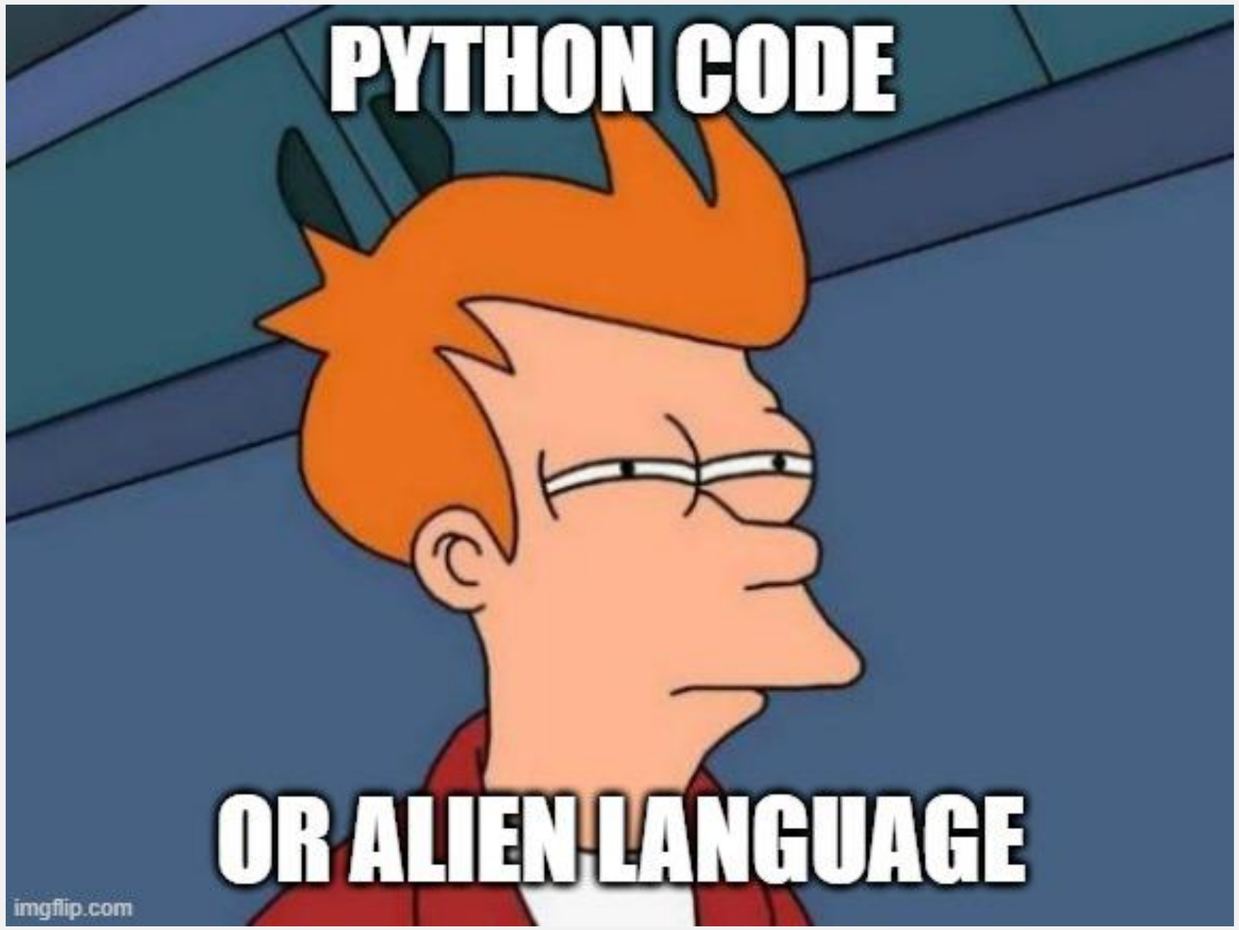
- It’s free
- It’s powerful
- It’s popular



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

DISADVANTAGES OF PYTHON:

- It can be frustrating.



Warm-up

- File: `calculations-in-excel.xlsx`
  - What are the limitations of our spreadsheet-based analysis?
    - Follow along with demo notes

QUESTIONS?

ACCESSING PYTHON FROM JUPYTER

jupyter

Install About Us Community Documentation NBViewer JupyterHub Widgets Blog

Project Jupyter exists to develop open-source software, open-standards, and services for interactive computing across dozens of programming languages.

https://jupyter.org/index.html

DEMO

- hello-from-jupyter.ipynb

4. CONCLUSION

Future learning

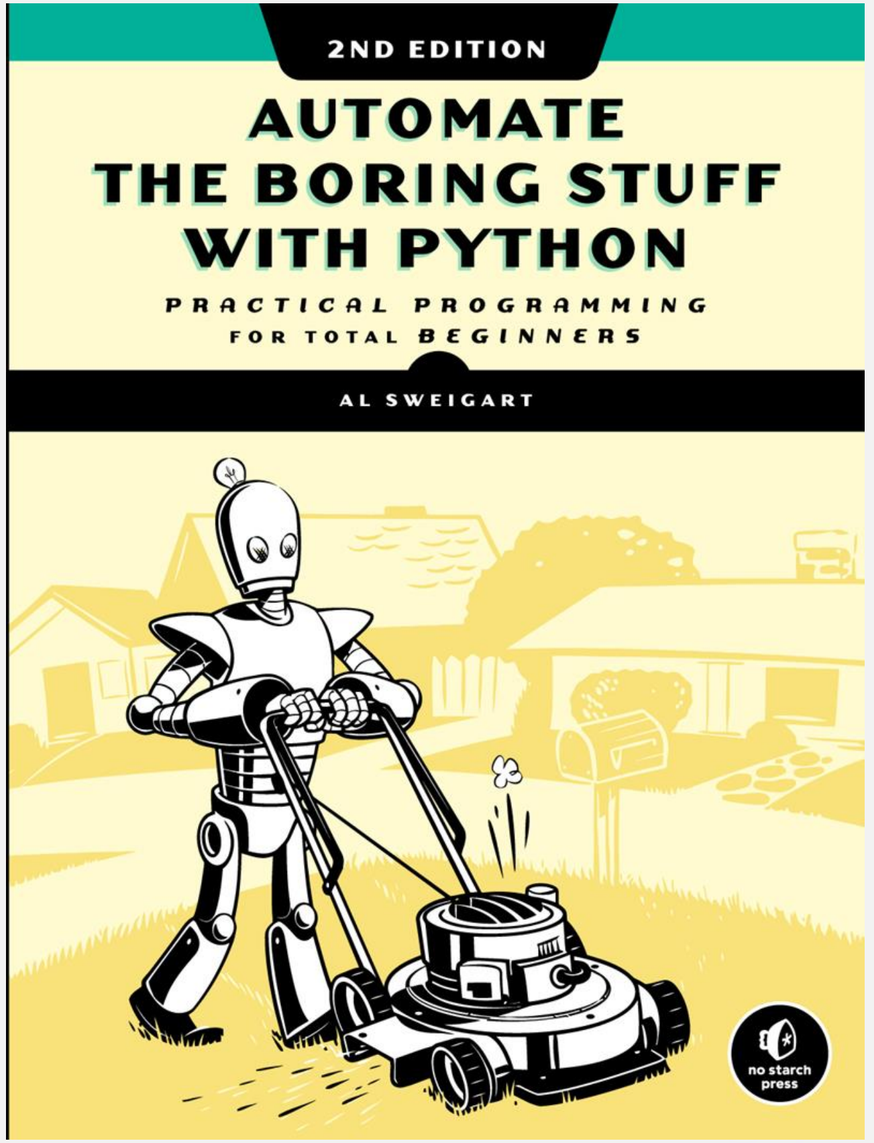
- Programming
  - Conditional statements
  - User-defined functions
  - Loops
- Remote data sources
  - Relational databases
  - APIs
- `pandas`, `matplotlib`/`seaborn` … oh my!

Download a local Anaconda distribution of Python

- Download for free at https://www.anaconda.com/products/individual

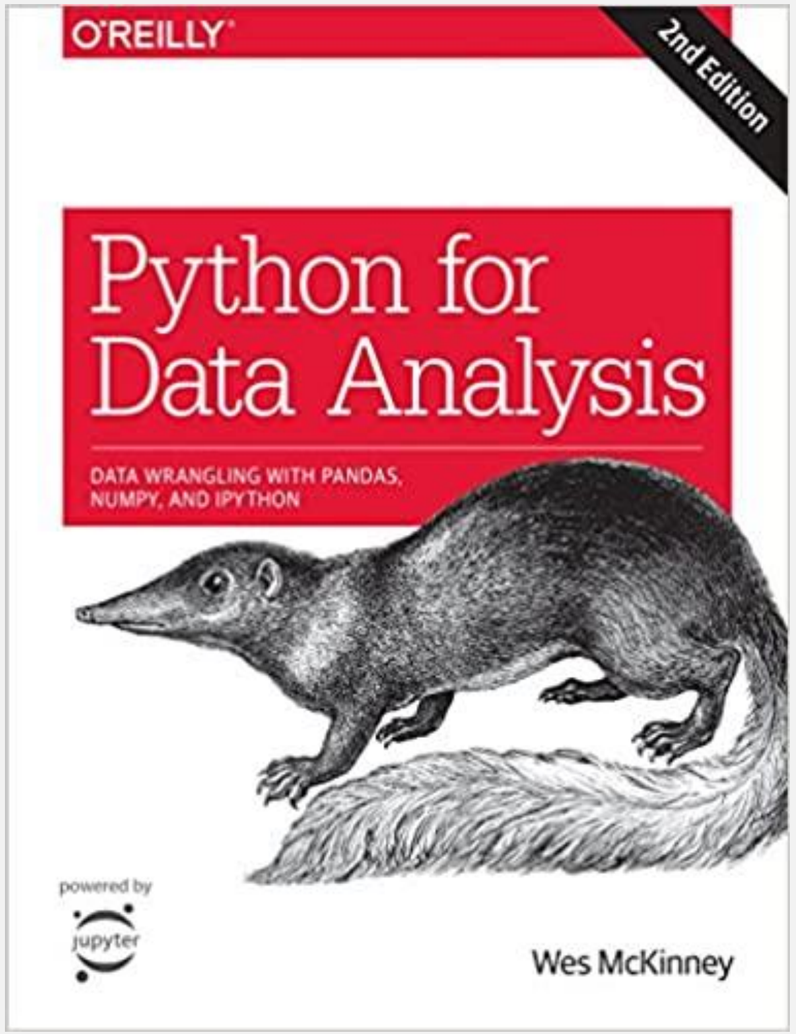
Automate the Boring Stuff with Python, 2nd Editition by Al Sweigart

- On O'Reilly Learning at https://learning.oreilly.com/library/view/automate-the-boring/9781098122584/



Python for Data Analysis, 2nd Edition by Wes McKinney

- On O'Reilly Learning at https://learning.oreilly.com/library/view/python-for-data/9781491957653/



Python for Excel by Felix Zumstein (Early Release)

- On O'Reilly Learning at https://learning.oreilly.com/library/view/python-for-excel/9781492080992/

STRINGFEST ANALYTICS

LET'S TALK

LINKEDIN

linkedin.com/in/gjmount

EMAIL ADDRESS

george@stringfestanalytics.com

WEBSITE

stringfestanalytics.com

GITHUB

github.com/summerofgeorge

QUESTIONS?