Data Science Basics: Additional Resources

Ethan Yoo, Data Science Graduate Specialist

Last updated: March 1, 2023

ethan.yoo@rutgers.edu

Microsoft Excel

- **LibreOffice Calc** and **functions by category**
- **Microsoft** documentation
- **Saylor Academy**: Spreadsheets, Spreadsheets II, Spreadsheets III

OpenRefine

- **Data Carpentry**
  - [OpenRefine for Social Science Data](#)
  - [Data Cleaning with Open Refine for Ecologists](#)

- **[OpenRefine user manual](#)**

SQLite and SQL

- **Tutorials**
  - **Data Carpentry** **(uses DB Browser for SQLite)**
  - **SQLBolt** **(browser-based)**
  - **SQL Zoo** **(browser-based)**
- **SQLite documentation**
- **Library of Congress: SQLite, Version 3**
  - **Technical details**
  - **Useful references**

SQL Queries

- **Tutorials**
  - **Data Carpentry (uses DB Browser for SQLite)**
  - **Khan Academy (browser-based)**
  - **SQLBolt (browser-based)**
  - **SQL Zoo (browser-based)**
- **Documentation**
  - **MySQL 8.0**
  - **PostgreSQL 15.2**
  - **SQLite (e.g., SELECT)**

Command Line and Scripting

- **Kaggle** (e.g., Intro to Programming)
- **Launch School**: Introduction to the Command Line
- **Library Carpentry**: The Unix Shell
- **Pandoc**: Demos

As you learn to code, please be aware of the power you are gaining. As you work on projects, whether your own projects or those that are controlled by someone else, please focus on projects that share power. Please refuse to work on projects that consolidate power, especially for those who will use it against others. (Coding is political)

Python Programming

- **Coding is political** and **Coding for social justice**
- **freeCodeCamp**
- **Harvard University**: CS50's Introduction to Programming with Python
- **Kaggle** (e.g., Python)
- **Python 3 documentation** and **Python for non-programmers**
- **Saylor Academy**: Introduction to Python
- **Swarthmore College**: Python reference
- **University of Helsinki**: Python Programming (Introduction to Programming and Advanced Course in Programming)

Python for Data Visualization

- **Coding is political** and **Coding for social justice**
- Documentation for **Matplotlib**, **Seaborn**, **and Plotly**
- **Humble Bundle** (books and courses)
- **Kaggle** (e.g., Python and Data Visualization)
- **Python Charts**
- The open access version of *Python for Data Analysis*
- **Python Crash Course, third edition**: Cheat sheets
- **Software Carpentry**: Programming with Python; Plotting and Programming in Python