Python

Session 4
3rd party modules, pip, pandas, virtual envs, notebooks

3rd Party Libraries (packages)

- Libraries not built into to python that have pre-made code and modules
- Need a package manager to handle outside packages
- PIP
- Use with “pip install <package name>

- https://pypi.org/

- Can check installed libs with **pip freeze**

Virtual Environment

- As you install new packages your python environment can get “cluttered”
  - Where you have all of these packages that are not used for the current project
  - Also different projects might use different version of packages so you would have to switch versions on your system
- Enter Virtual Environment https://docs.python.org/3/library/venv.html
  - It has your base install of python and then you can add all of the project specific 3rd party packages
- Command to create a virtual env (venv)
  - **python -m venv .venv**
  - Activate the venv
    - **.venv/scripts/activate (on windows)**
    - **source ./venv/bin/activate (on mac)**
  - This creates a .venv folder in your directory that holds all the project specifics

Some handy 3rd party libs

- Numpy
  - https://numpy.org/
- Pandas
  - https://pandas.pydata.org/
- Matplotlib
  - https://matplotlib.org/
- Plotly
  - https://plotly.com/

Notebooks

- It would be nice to see what is going on with code blocks without running python … from the CLI everytime
- Enter Notebooks
- If you make a file with a .ipynb extension instead of .py - VS code knows to make this a notebook file.
- You can then run blocks of code.

Pandas

https://pandas.pydata.org/Pandas_Cheat_Sheet.pdf