

HW1: Data Visualization

Due 18 July 2022

For this homework assignment, you will be choosing one of the following data sets to explore and visualize. The goal of this assignment is to become familiar with the process of data exploration and find effective ways to communicate data through graphs and plots.

The most useful libraries will be **pandas** for managing the data and **matplotlib** for visualizing it.

[Here](#) is a guide to formatting text in markdown.

Main Steps

1. **Fork** this **repository**. Feel free to make **commits** and **push** along the way.
2. Create a new **Jupyter Notebook**. Make sure to **git add** it.
3. Make the first cell a markdown cell and input a title and your name.
4. Now you can import your chosen data set and start exploring.
5. Please answer at least **two** of the questions below and **one** of your own.
6. Make sure to include markdown cells throughout your notebook describing what you are doing and anything interesting you find along the way.
7. At the end include a paragraph summarizing what you have found.
8. When you are done make a final **commit** and **push** it to your GitHub repo.

Data Sets

Punxsutawney Phil (PunxPhil.csv)

- Is there a correlation between shadow sightings and the overall February temperature?
- Is Phil more accurate for his home than other areas?
- How do the march temperatures compare to February?
- Are there any noticeable trends in February temperatures over time for the various locations?

Bigfoot Sightings (BigFoot.csv)

- How does the number of sightings vary by month or season?
- What time of day do most sightings occur?
- Where do most sightings occur?
- Does temperature seem to have any effect on sightings?

UFO Sightings (UFO.csv)

- How long do UFO sightings last?
- Is there a correlation between latitude and sightings?
- What time of day do most sightings happen?
- Does the shape of the object and the location of the sighting have any correlation?

Shoe Prices (WomensShoes.csv, MensShoes.csv)

- Whose shoes cost more on average?
- On average, is the most expensive brand the same or different for men's and women's shoes?
- Do brands tend to have similar prices for women's and men's shoes?
- What brand has the widest spread of prices?