**Development Requirements**

You will be responsible for:

1. Using Pandas to clean and format your dataset(s).
2. Creating a Jupyter Notebook describing the data exploration and cleanup process.
3. Creating a Jupyter Notebook illustrating the final data analysis.
4. Using Matplotlib to create a total of 6–8 visualizations of your data (ideally, at least two per ”question” you ask of your data).
5. Saving PNG images of your visualizations to distribute to the class and instructional team, and for inclusion in your presentation.
6. *(Optional) Using at least one API if you can find an API with data pertinent to your primary research questions.*
7. Creating a write-up summarizing your major findings. This should include a heading for each “question” you asked of your data and a short description of your findings and any relevant plots.

**Presentation Requirements**

 You will also be responsible for preparing a formal, 10-minute presentation that covers:

1. Questions you found interesting and what motivated you to answer them
2. Where and how you found the data you used to answer these questions
3. The data exploration and cleanup process (accompanied by your Jupyter Notebook)
4. The analysis process (accompanied by your Jupyter Notebook)
5. Your conclusions, which should include a numerical summary and visualizations of that summary
6. The implications of your findings: What do your findings mean?

**Categories for grading**

* GitHub repository (20 points)
* Visualizations (20 points)
* Analysis and conclusion (20 points)
* Slide deck (20 points)
* Group presentation (20 points)

**Timeline**

* Thurs Dec 2 – Research, Dev and discuss
* Sat Dec 4 -- Research and Dev
* Tues Dec 7 -- Presentation Prep
* Thurs Dec 9 -- Presentations

**Questions to Answer:**

1) How has COVID impacted Domestic violence rates in Cook County (Chicago)?

2) Which communities have been the most impacted by this?

3) How did rates during the quarantine compare to rates when we weren't in lockdown?

**Possible visualizations using Chicago Data Portal data:**

* A timeline (spanning 2018, 2019, 2020 and 2021) of the count number of records in the dataset by quarter (by month) where Domestic = True
  + This should show the general trend of rates. Did they dramatically spike or drop at any point? Are they still going up? Is Covid having a cumulative affect on rates?

* A chart of some kind (bar or pie) to illustrate the relative geographic composition breakdown of domestic violence related incidents