Final Project Reflection

Dates	@March 14, 2022
Type	Project
Topic	
Week	Week 10

**Yes, you can share this with our names 😈

✍️ By Justin & Emily

Maps of U.S. Census & Police Shooting Data

i) Introduction to the Problem

The problem we encountered was that the county demographic data was collected in 2020 and the police shooting data was collected from 2015-2020. When we created maps, it was solely based on the aggregated data over this time period. We both felt that there was key information that could be displayed through progression of how counties changed over time.

ii) Your Team's Solution

We split this project up into 3 main parts

1. Processing and Interpolating the `csv` files with Python
2. Refining Mapnik to produce maps that are visually compelling
3. Creating a website that allows easy consumption of the maps

Fortunately, we did have data for each individual year between 2015 and 2020 for the police shooting data. We had to manually account for the 3 counties that were not included within one of the `csv` files. Our team decided on using Python since it has a great libraries that we can leverage. We used the default `csv` library to parse through and write out to the 4 years (2015-2019). Mapnik involved simple fixes such as setting constants for the max and min values for all years. We also changed up the color map and state/county lines for better readability. Finally, we developed a website that includes animations & visuals that anyone can understand easily.

iii) Results

> 👉 Refer to the website for results!

iv) Most interesting technical challenge

We really did not like parsing out the information manually within excel. Our parse function within C++ uses `stod` and it did not like it when we were not passing strings into the program. We spent a lot of time trying to figure out a way to change numbers in excel to be quotation bounded. Finally, we decided on jumping through multiple hoops such as `= ' & A1 & '` and replace all within text edit. Another bug that was prevalent was Overflow of values especially in Median Income.

v) Most Interesting Learning Outcome

- To many individuals, The U.S. seems like a diverse country with people from a wide variety of races. However, this project shows otherwise. What we can conclude is that regardless of how we may think we live in a diverse society, there is still racial segregation. This is evident in many maps including the those for the LatinX and Asian population.
- Though there are many reasons as to why this might be the case, one that we have thought of is the fact that people are more likely to immigrate to places where they feel comfortable. In most cases, this means immigrating to areas where they can find people similar to them. For example, in the Asian American map, we can see that there are lighter colors around coastal areas where California and New York are located.

vi) Member Contributions

```
Justin

Made the CSV’s using Python
Compiled and displayed the maps using a website
```

```
Emily

Created the maps using Mapnik
Gathered key information such as min. and max. values for each field.
```

Together, we conquered the triple quotes using notepad and the amazing tool called “replace all”