DSC 106 Assignment 1

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Github Repository: https://github.com/Nroberts23/DSC_106_Assignment1

Part 1, Google Suite:

This assignment started with making visualizations through Google Sheets. This by far was the easiest tool to use, but that may be in part due to the fact that I have had experience making visualizations here before. Sheets may not be the most versatile program to use, but this is mostly balanced out by Sheet's ease of use and clean design. *Mostly*. While working through the program I became frustrated with the program's inability to perform certain functions which I thought should be standard. Specifically I was annoyed that the program would not allow me to switch the order of slices on the pie chart and would not allow me to edit the chart legends.

Pros: Simple interface, beginner friendly
Cons: Limited in functionality and customization

Part 2, Infogram:

By far, Infogram was the program which surprised me the most. I came to the program as a new user, unfamiliar with what I could do in the program, but I soon found myself with a reliable tool that I will definitely be returning to. Everything that Google Sheets does, Infogram does better from a visualization standpoint. Good looking charts were just simply fast and easy. I ran into some complications when I found that one cannot sort their data while inside the program, a feature that I liked in Sheets. However, this small downside to the program was balanced out by the introduction of Infogram's interactable charts. While it does not have as much potential for interaction and customization as some of the later tools in this assignment, Infogram still has more than enough versatility for making quick and simple charts. Overall, the program left a great impression with me.

Pros: The ultimate tool for simple visualizations
Cons: No data manipulation, Still somewhat restrained in customization

Part 3, Tableau:

I would say that Tableau wins the prize for the least memorable user experience. The interface of using tableau made me feel more like I was staring at a graphing calculator than using a tool meant to accomodate my creative design. The fact that Tableau was underwhelming is likely due in part to the fact that it fell in the middle of the trade-off between ease of use and power of features. There was definitely a learning curve, but more than difficult, the program just felt awkward. Most frustrating of all was the fact that while using Tableau, I could tell that there was definitely a lot that the program could offer me, but it felt like this functionality was obscured behind walls of un-intuitive design. Tableau almost tries to be user-friendly while having a vast amount of customization, but it does neither particularly well upon first use. To its credit, I will say that given more time with the program I could perhaps draw a lot of use from its "Dimensions" functionality in particular.

Pros: Dimensions are a great addition to data exploration and interaction
Cons: Unintuitive design, Forgettable

Part 4, D3:

Ladies and gentlemen, here it is: the supposed golden hammer for data visualization. Well, after fighting to make charts written in JavaScript with d3, I more or less feel like that hammer has hit me over the head. The first problem I encountered was simply getting D3 to parse my csv file. I continued to run into issues hosting my site using apache which took me hours to fix. While it is true that this is not directly the fault of D3, it certainly soured my experience in this section. Once I fixed my hosting issue (I ended up just hosting it through python's SimpleHTTPServer, a one line fix for my hours of complications), I found myself waist-deep in JavaScript. Ignoring JavaScript's terribly vague error messages and unfamiliar syntax, the actual coding of the charts wasn't the worst. That being said, it took me a couple of hours to put together my first chart, which compared to those made with the previous tools, looked awful. Simply put, I spent a great amount of time to be rewarded with an underwhelming end result.

Pros: I assume there's great functionality here, but I wasn't willing to put in the effort to find it
Cons: STEEP learning curve, CORS request complications

Part 5, Highcharts:

After being thoroughly frustrated with D3, I just wanted to be done. It fully sunk in that, even though the industry praises certain tools, that doesn't mean they are the right things to use. Sometimes you can get higher quality results from less work. Message received. Considering my rough patch with JavaScript, I was not particularly excited about hopping back into learning another charting library. Luckily for me, Highcharts has a web application which offers a fair amount of usability without being cumbersome. So, yes, I did not work with Highcharts in JavaScript, but I did work with Highcharts. Overall, the web version of Highcharts worked well, but in terms of web-based, chart-creating dashboards, Infogram still has it beat. Based on examples on their website, it appears as if the program would be perfect to have if you needed to embed an interactive chart on your webpage, but for as simple charts as we were assigned, there's simply no need to go too crazy with JavaScript use.

Pros: Simple layout when used within JavaScript, Straightforward functionality
Cons: No need to be overkill for simple charts, Difficult to manipulate an imported csv file using JavaScript