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Afia-Grace Harris's Dashboard:
https://public.tableau.com/app/profile/afia.grace.harris/viz/NvolveCOVID-19AG/Dashboard1#1

Violet's Dashboard:
https://public.tableau.com/views/NVOLVEFALL2O22/TotalCases_1?:language=en-US&:display_count=n&:origin=viz_share_link

**NVOLVE Data Visualization Project 1**

**Number of COVID-19 cases differed by race over the time between 2020-2022**

Afia-Grace Harris, Violet Reges

The goal of this project was to determine how the number of COVID-19 cases differed by race over time between 2020-2022. This analysis focused on Maryland, Unites States and disregarded any other geographical locations. The data was collected by the state of Maryland and posted for public use. The data set included data from White, African American, Hispanic, Asian, Other, and "Not Available" races.

The data provided was clean and did not need extra organization. The first nine days that data was collected was not accurate for no data was collected on day two and no data on the Hispanic population was collected until day ten. Therefore we disregarded the first nine days of data. Races with no COVID-19 data were also disregarded.

There were some other issues with the dataset. The Maryland Government collected a running total of COVID-19 cases by race were While analyzing, we found that on some days the running total of COVID-19 cases decreased. This is impossible as the total number of cases can only increase or remain the same. It was not possible for the analyzers to deduce which running total was correct or incorrect, so that data was kept in the dataset. To mitigate this issue, the graphs made of the running total of COVID-19 cases was not graphed on a day to day basis, instead that graph based on quarterly count. The quarterly total would minimize the inaccuracies of the data enough to make those inaccuracies inconsequential to the accuracy of the graph.
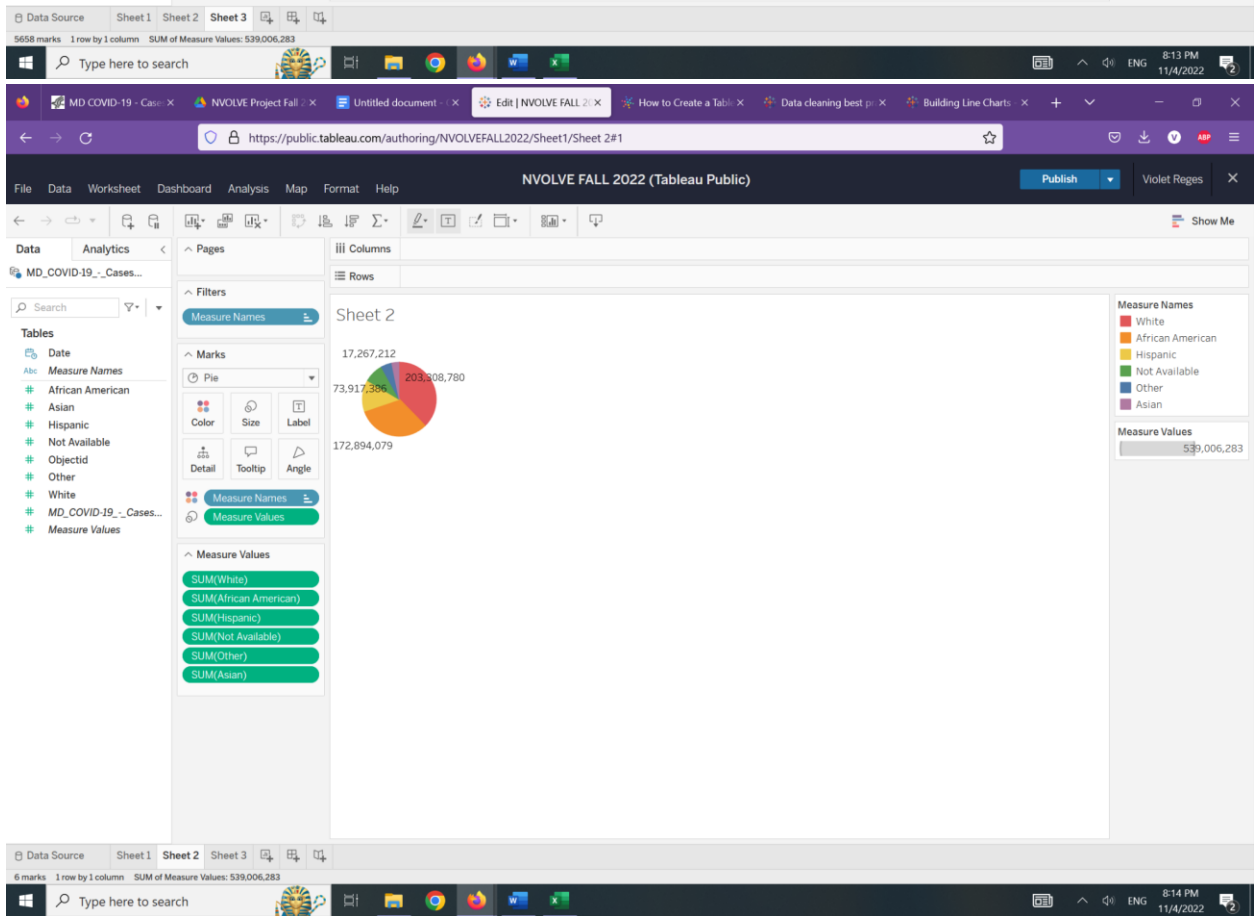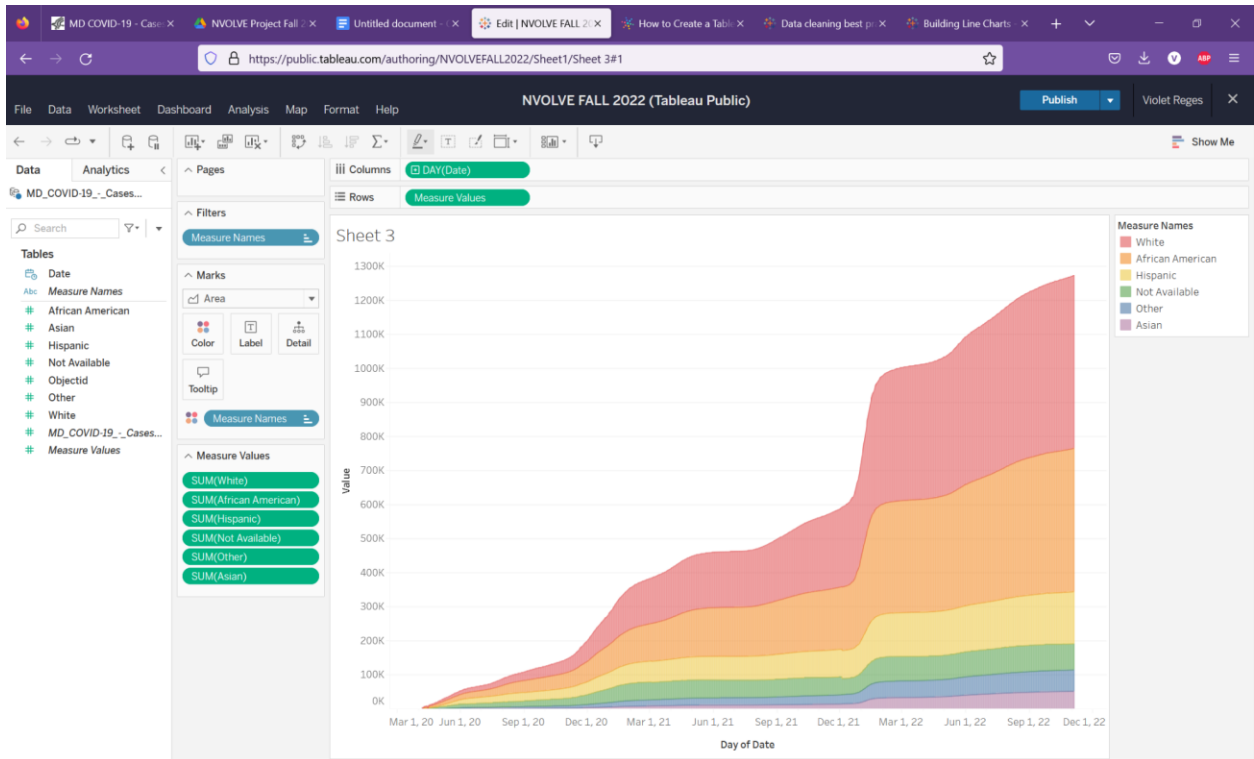
The approach that the team took to this project was to dive in head first into the data. The data was first cleaned and then graphical depictions of the data were built using Tableau Public. The team used a mix of both pie charts and line graphs to help visualize the data.
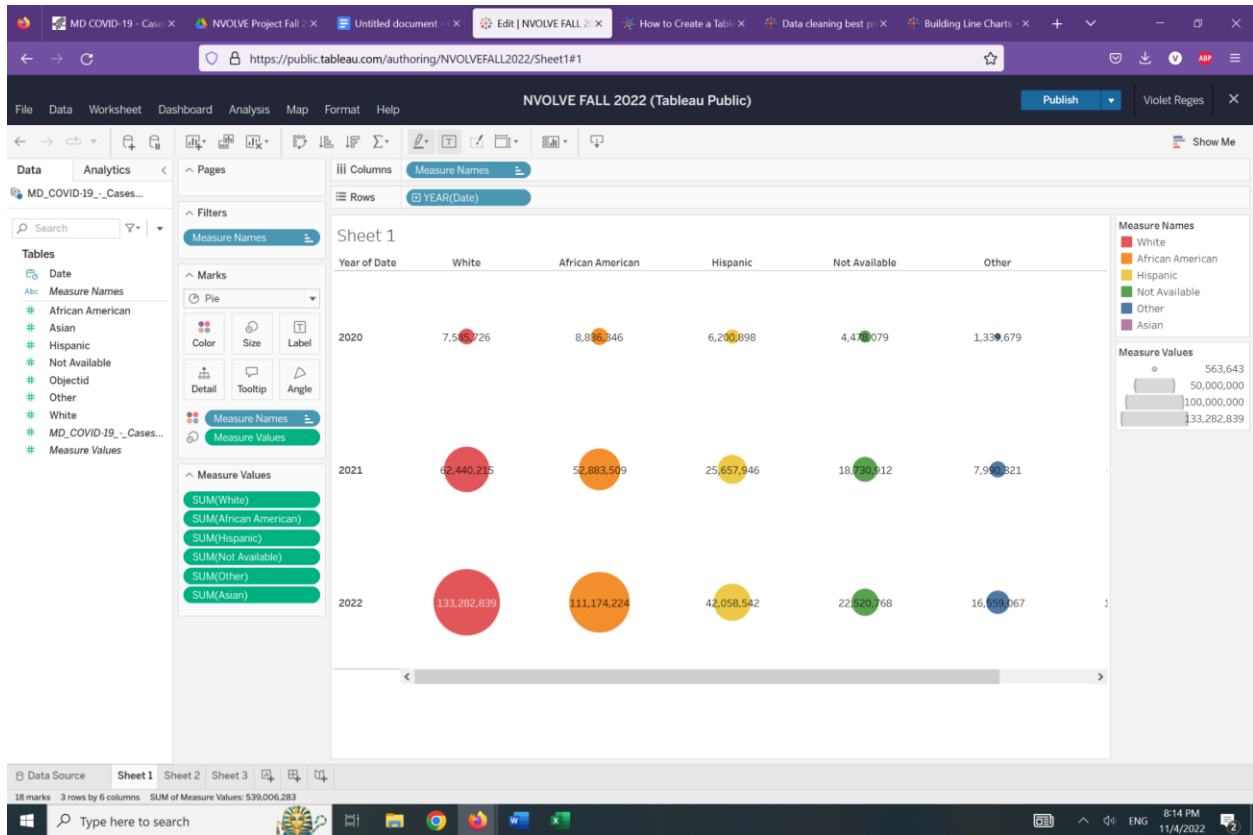
After visualization of the basic data, we identified trends and discussed what futher ways to analyze the data. The team decided to add to the dataset to find the percentage of the total number of COVID-19 cases across each of the 6 categories on each day. The percentage was depicted in a line graph that was taken on a day to day basis. This choice was made because the data on each day had been combined with all the other races and then calculated, this decreases the amount of error that the final data set has. The pie chart included provides valuable information to the public as it clearly and easily shows the total number of COVID-19 cases across the 6 categories as well as the distribution across those categories.

The team members did not need to do additional research about the COVID-19 pandemic because we lived through it and were already knowledgeable about COVID-19 and how COVID-19 disproportionately affects different races. Instead, most of the research that the team did was learning how to use Tableau Public. Neither of the team members had used Tableau before, so most of the time spent on this project was building the dashboard and creating graphs in Tableau.

Surprisingly, after visualization. We found that white individuals had higher amounts of COVID-19 cases compared to other high risk minority groups such as African-Americans in Maryland between 2020-2022. However, among the minority groups, African-Americans had the highest cases of COVID-19 in Maryland between 2020-2022.

We found the experience of this project to be very valuable to our learning. The experience gained from working with large datasets and the Tableau Public program has been invaluable to our education. If asked to represent data in classes, we will definitely use Tableau for visualization because it represents data in a clear and aesthetically pleasing way. Working with our project mentor helped guide our progress through the analyzing process. Knowing how to use Tableau will undoubtedly help us in our future careers as well when needing to visualize data.

Census Data:

https://www.census.gov/library/stories/state-by-state/maryland-population-change-between-census-decade.html