Prabhjot Singh Gill – Data in The USA – Documentation

Overview:
This project should display on any normal screen size. The color scheme I used consists of blues. I used this theme because it was very easy to dee and the darkening/lightening was very well noticeable. Think this made the data readable. I also have scrolling, I did this, so the visualizations are nice and large. I didn't want them to be too small as it limits how readable it was, especially on my smaller laptop.

Motivation:
The motivation to my project was common, but most people don't think about. That is the correlation between poverty and health. Although it may seem obvious once pointed out, but the scale is a lot larger than one might initially think.

The Data:
Six attributes I selected are median household income, poverty percentage, and education less than high school. These items display the income level of communitas. The other three are smoking, inactive, and heart disease. The data is derived from CDC. The data set includes American counties and categories related to health, socioeconomics, and environmental data.

https://www.cdc.gov/dhdsp/maps/atlas/index.htm

Visualizations Component:
Scatter Plot:
This scatter plot visualizes the correlation between different attributes across all U.S. counties. The X-axis is smoking, inactive, and heart disease while the Y-axis is median household income, poverty percentage, and education less than high school. This updates when the drop-down values are changed. Hovering over the dots displays a tool tip. The user may also select dots which would then update the bar graph. I also chose to filter so the data was more manageable, it just felt easer to see. For this I needed to update the scale. This helped the data be very easily be understandable when using the brush.

Bar Graph:
This is very similar to the scatter plot. Selecting bars here will update the scatter plot.

Two Maps:
There are two maps. One for each axis.

Discovered:
This data visualized shows trends that aren't directly apparent. It proves that you are much more likely to have poor health habits depending on your socioeconomic status. One example is you are much more likely to smoke, even though it's an expensive habit. In fact,

upon looking this I discovered that poorer communities are advertised these substances more.

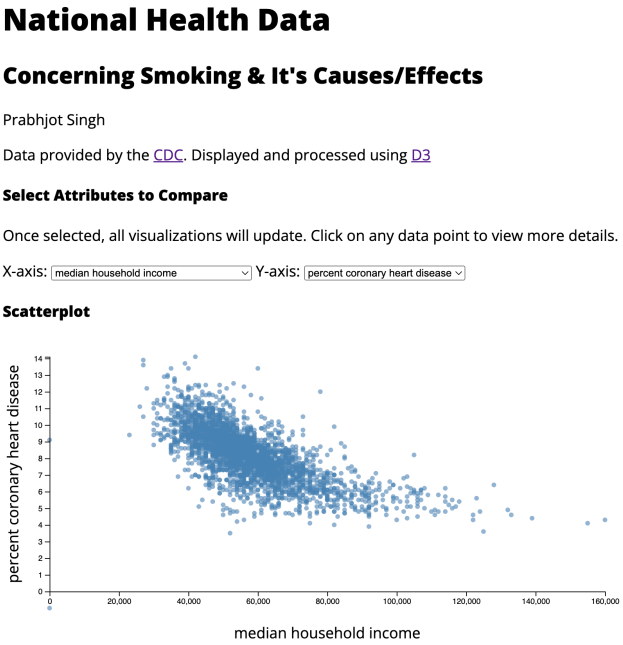
Challenges and Future:
I faced many challenges while working on this project, one of them being time. This led to some bugs in my code. Although, the code is there for every feature, it was not tested that well leading to breaks in some features. For the future, I would love to make the UI a lot better, especially from what I learned in the UI class. I would also fix a lot of bugs.

Use of AI:
I used AI sometimes, which was to mainly debug. AI was not that helpful as this project used a lot of external files. I also just used it as a better Google, to search things and boilerplate code for features.

Things Tried:
The tooltip code is all there but I noticed it does not appear at times. I think this has to do with the overlap of the brush.

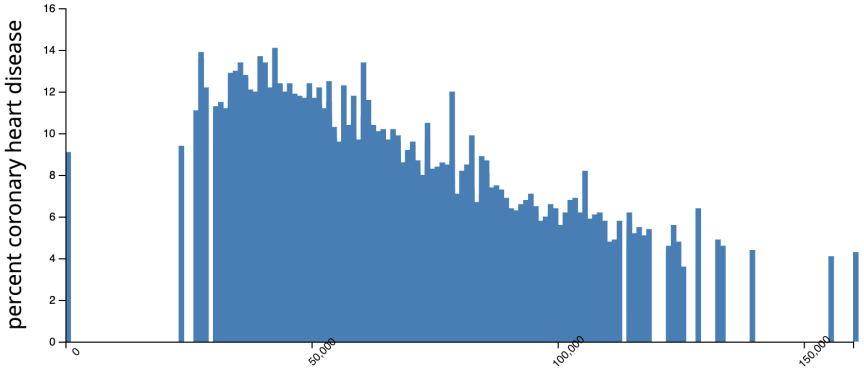
Video Demo:
Attached on submission.

Images:



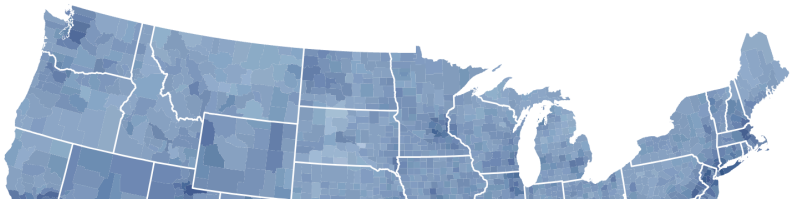
median household income

Bar Chart



median household income

X-Axis & Y-Axis Maps



X-Axis & Y-Axis Maps