Project 3: Interactive Map Visualization of Chronic Disease Mortality in California Counties

A rationale for your design decisions. How did you choose your particular visual encodings and interaction techniques? What alternatives did you consider and how did you arrive at your ultimate choices?

Our visualization was an interactive map that was implemented using D3. The data we chose to visualize was deaths from chronic disease in California by county, which we procured from data.gov. We chose to include the specific chronic diseases of Heart Disease, Liver Disease, Cancer and Diabetes as these are chronic diseases of concern in the United States. Our vision was to have the counties on the map colored by the death rate per 1000 people from all these chronic diseases combined, with higher saturation representing higher death rates and lower saturation representing lower death rates. We visualized this with our legend, and the color we chose was blue as this worked well with saturation while still being pleasing to look at. We then wanted to implement certain functionalities on the map including zoom, the ability to hover and reveal county name and the ability to click on a county and get the name, number of deaths from each specific chronic disease and the total population of that county. We implemented this using a tooltip and tracking hover and click events. In the end, this did a good job of effectively conveying our key information. That is, it revealed the relative death rates at a glance, and upon clicking and interacting with the map users are able to gain more specific information about mortality in each county. We considered using the alternative of Mapbox to implement these same functionalities, but then learned that this was not permissible for this assignment. Thus, we chose to implement these functionalities using d3 and a geoJSON file that containing California counties and their borders.

An overview of your development process. Describe how the work was split among the team members. Include a commentary on the development process, including answers to the following questions: Roughly how much time did you spend developing your application (in people-hours)? What aspects took the most time?

We both worked together in person on the development process. We first started with coming up with ideas, trying to develop each other's ideas and then looking for suitable datasets. After finding two suitable datasets(one a geoJSON file for the California counties coordinated and the other a dataset from the California government with mortality rates), we combined our csv data into the geoJSON file as additional features.

Post this, by using multiple d3 features, we created layers, a color scale,legend, and a tooltip with mouseover and click functionality.
One of the aspects that took the most amount of time is learning how to combine the geoJSON data with the csv and use it. After that, we faced difficulties in making the hover disappear everytime we wanted to click. The biggest issue we faced was trying to center our svg, map and legend. Implementing it in a way it does not cut when we zoom and does not cover the title upon

zooming. We always worked on the project together, with equal contribution and spent approximately a total of 20 hours.