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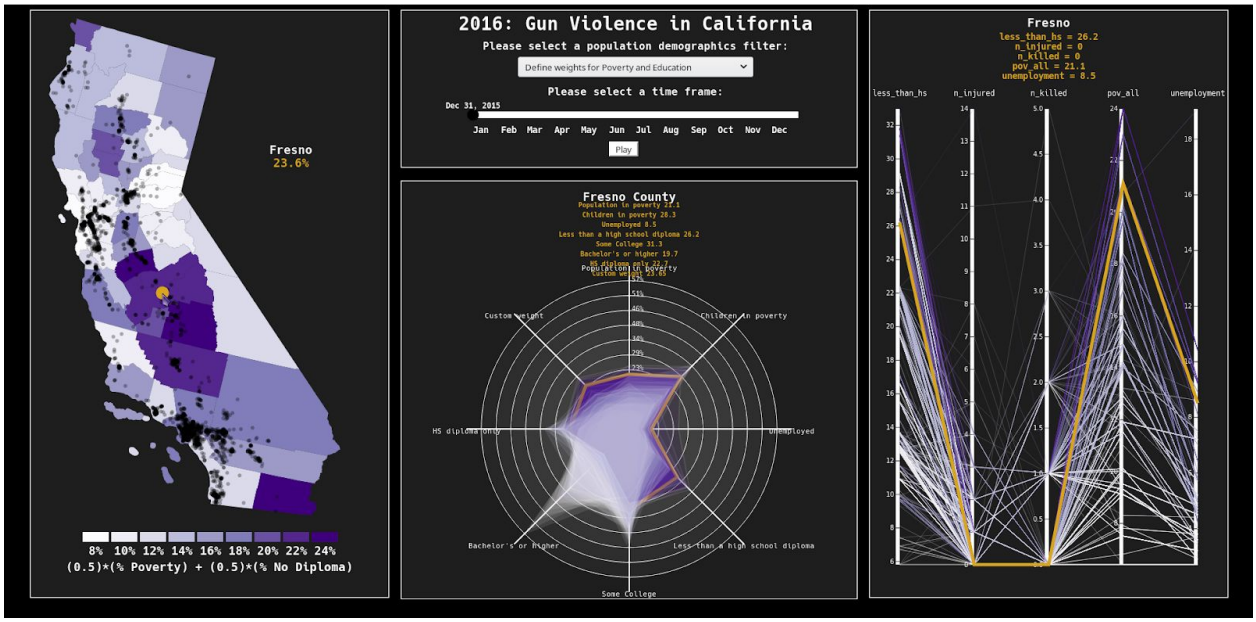
Ecs 163
Final Project

I'm interested in seeing how gun violence correlates with local economics and education. The data sets I have found are on Kaggle and through USDA research. Economics will be broken down into: poverty rate, child poverty rate, and unemployment rate. Education will be broken down into: under high school, high school, some college, associates, and bachelors or above. Data will be restricted to 2016, as that is the only year in which I could find precise information. I would expect that as education decreases and poverty rate increases-- that gun violence would increase as well. The visualizations will be laid out as follows:



I had to scrap my original idea as I couldn't get d3 to load 50k+ data points in a reasonable amount of time for even the map; so I reduced it from the USA to CA. Because I was now working with a single state, tiered filtering didn't make as much sense-- so I scrapped that as well. I scrapped any experimental ideas I had for the sake of time.

The main controls are in the top center. The dropdown feature allows filtering of the map's color domain, the axes on the radar chart, and the axes of the parallel lines. There are three choices: poverty amount, education, and an option in which the user can define weights between the two via a popup. Each dropdown option comes with it's own color domain. Below the dropdown is a time slider. As play is pressed it animates through the year-- showing the accumulation of gun violence. Recency is reflected in the transitions of new points entering the

map, and new lines entering the parallel chart.

The leftmost visualization is a choropleth map. Each dot on the map represents an incidence of gun violence. Hovering the dot emphasises it, its corresponding radar chart line, and its radar chart data. Individual counties can be selected with a click, which filters the parallel lines. Clicks also filter new input from the time slider (e.g. the parallel line chart is only filled with data from that county.)

The rightmost visualization is the parallel line chart. Each line can be hovered over with correspondence in the other two visualizations. Each axis can be filtered with a drag tool, which updates the scatter points in the map. Sadly, I could not get it to correspond with the time slider-- so if the time changes, the parallel line chart resets.

In the bottom center we have the radar chart. Each polygon represents a county. The axes of the radar chart correspond to the selection in the dropdown menu, it breaks education and poverty into further categories. Since this chart corresponds with attributes of each county-- I couldn't find a non trivial method to incorporate the time slider.

There was much I could have done to improve: incorporate parallel chart filtering temporally, correlate clicks to filter the radar chart's contents, etc. Working with the different data sets was difficult, I had to reduce massive data to the crux of what I wanted to look at-- and each visualization set had a main basis of one of the sets with the other being supplementary.