Design Progress Report 3

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Data Processing Fall 2018
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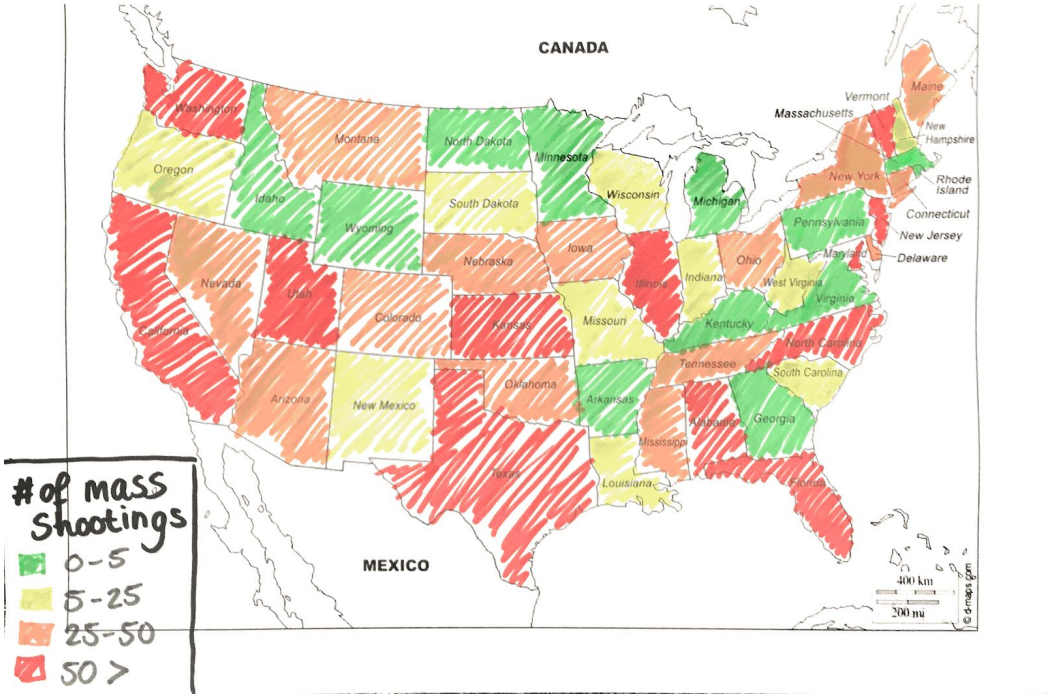
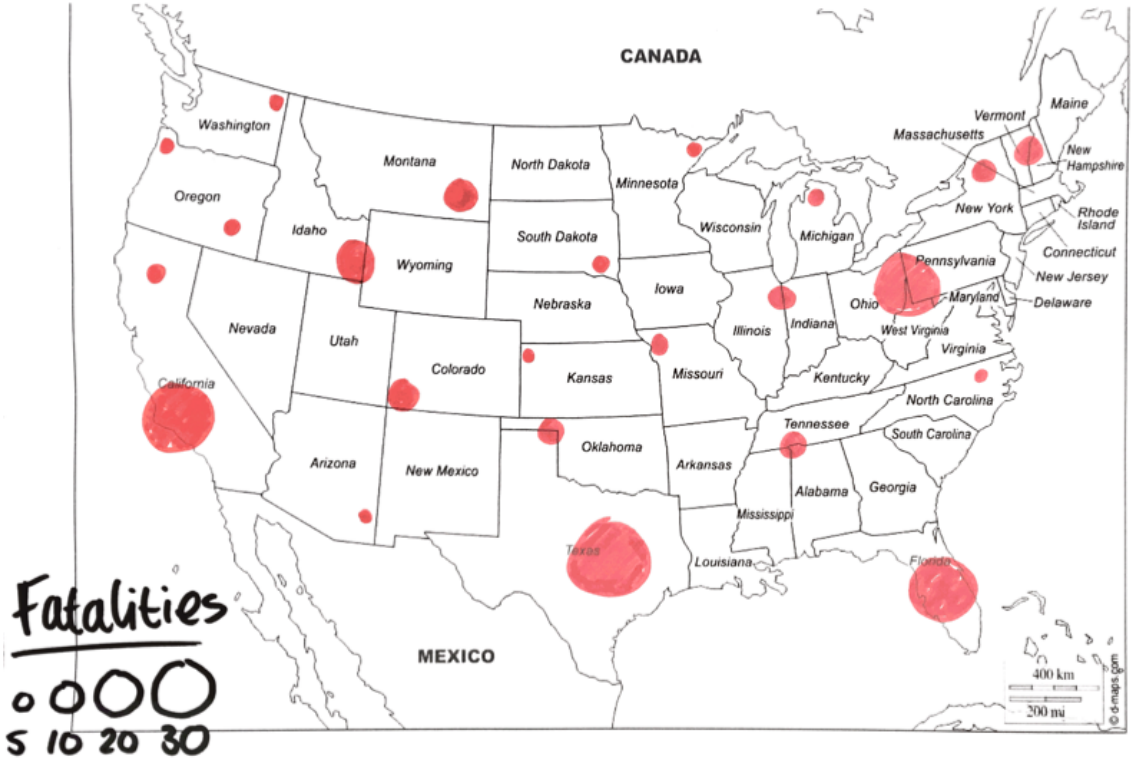
The US: safer 50 years ago or now?

A datavisualization analysis of the amount and spread of mass shootings in the US. Do the amounts of guns/gun ownership make the state more safe or more likely to be hit by a mass shooting?

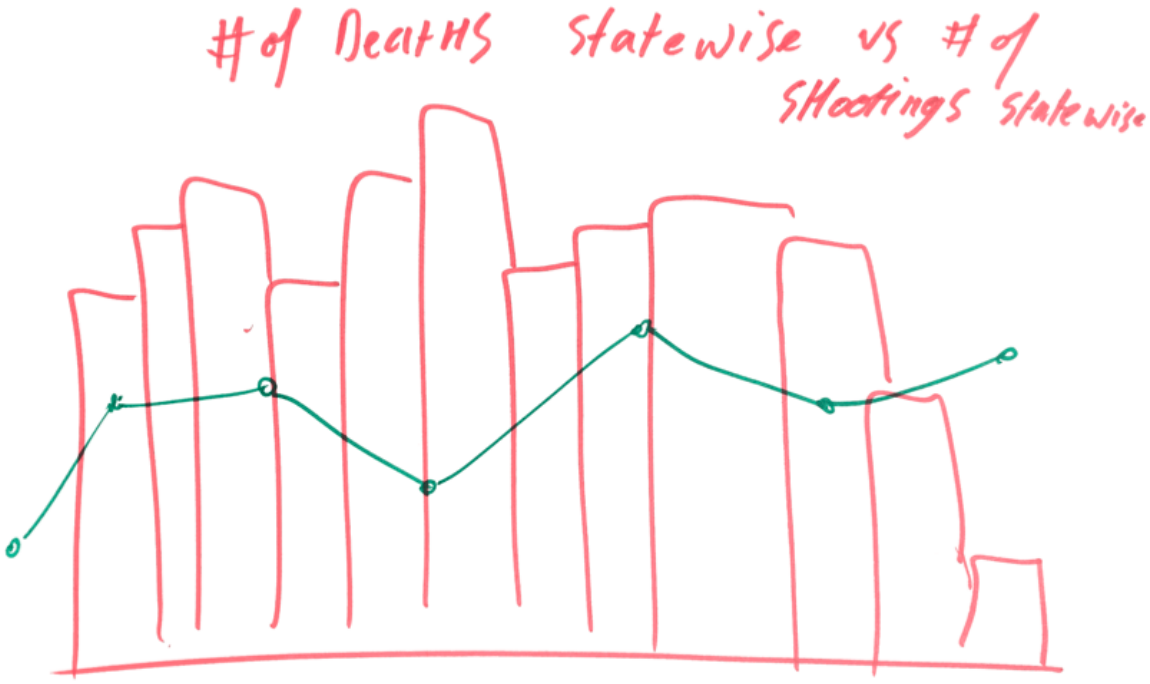


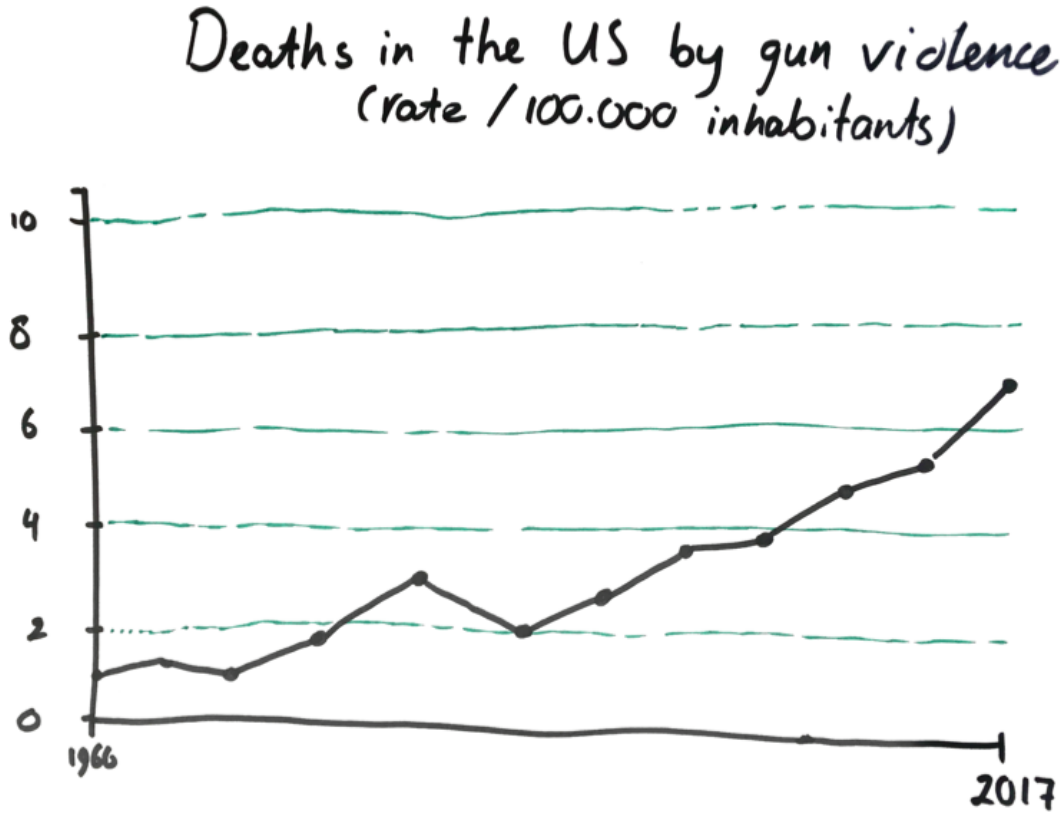
First we depict the differences in each state of the number of mass shootings in a heat map. The viewer gets a global impression of which states have had the most mass shootings over the past 50 years. With the next picture we would like to enhance this effect by actually assigning red dots to the map (see next picture).

The takeaway from this graph is rather straightforward and self explanatory, namely, it depicts the locations of all mass shootings included in our data set across the contiguous United States. An interesting pattern we'd like to derive from this graph would be one where we see a higher density of public shooting incidences in more densely populated areas, states known for their affinity with gunmanship (e.g., Michigan), or cities with high crime rates or known gang-activity (Detroit, Chicago, Los Angeles, Baltimore, etc).



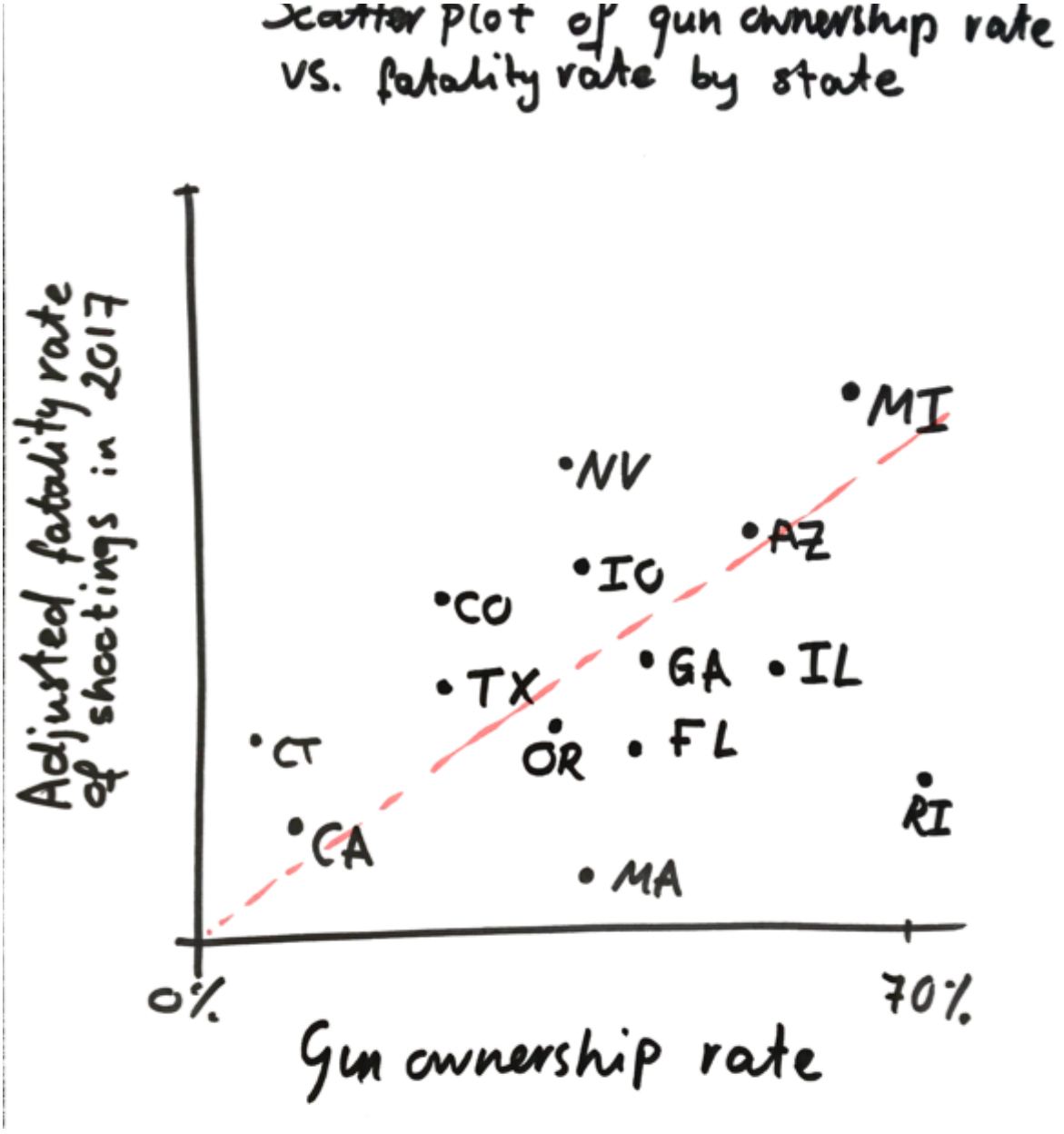
Here showing the number of fatalities and so showing the difference in fatalities and injured. This maps serves as a way to illustrate regions with higher fatality rates during public shootings as measured by the radii of the red circles.





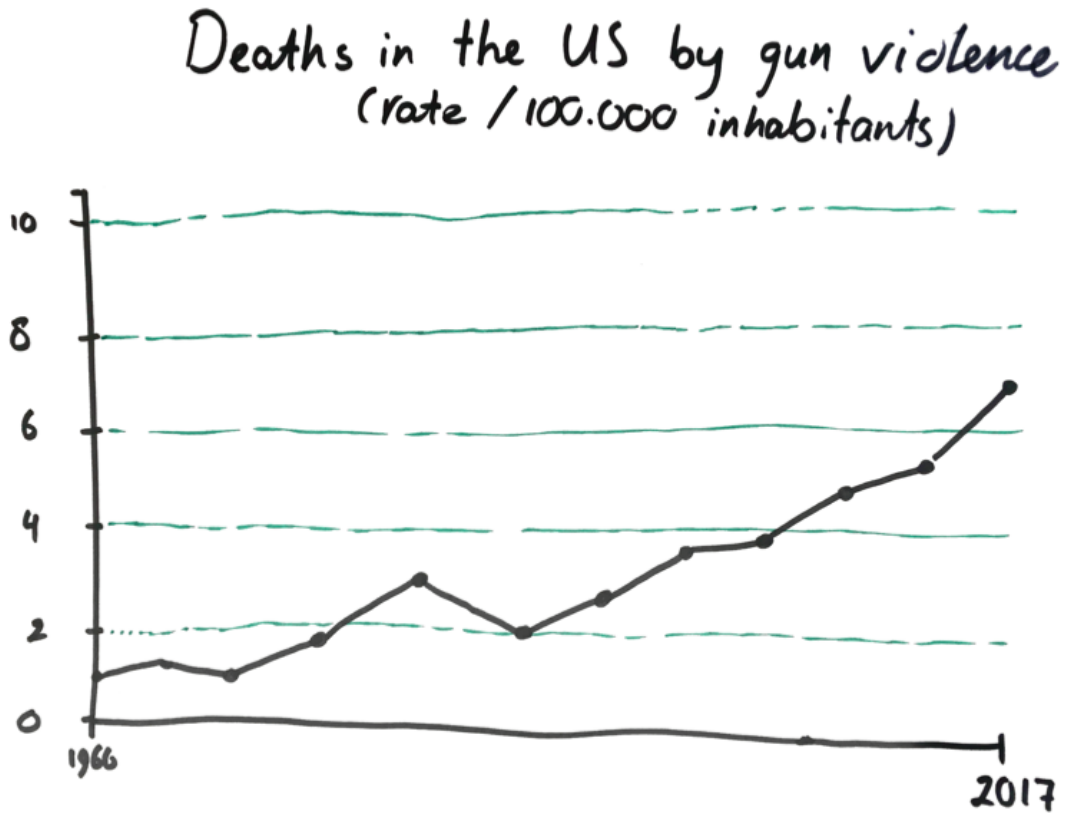
We will show a few pretty bar charts like the above one. We will also create one with time on the x axis and number of shootings/fatalities on the y axis to depict whether the US has

become safer or more unsafe, with regards to mass shootings. Can we see a trend in time with rising amount of shootings or diminishing over 50 years of data.

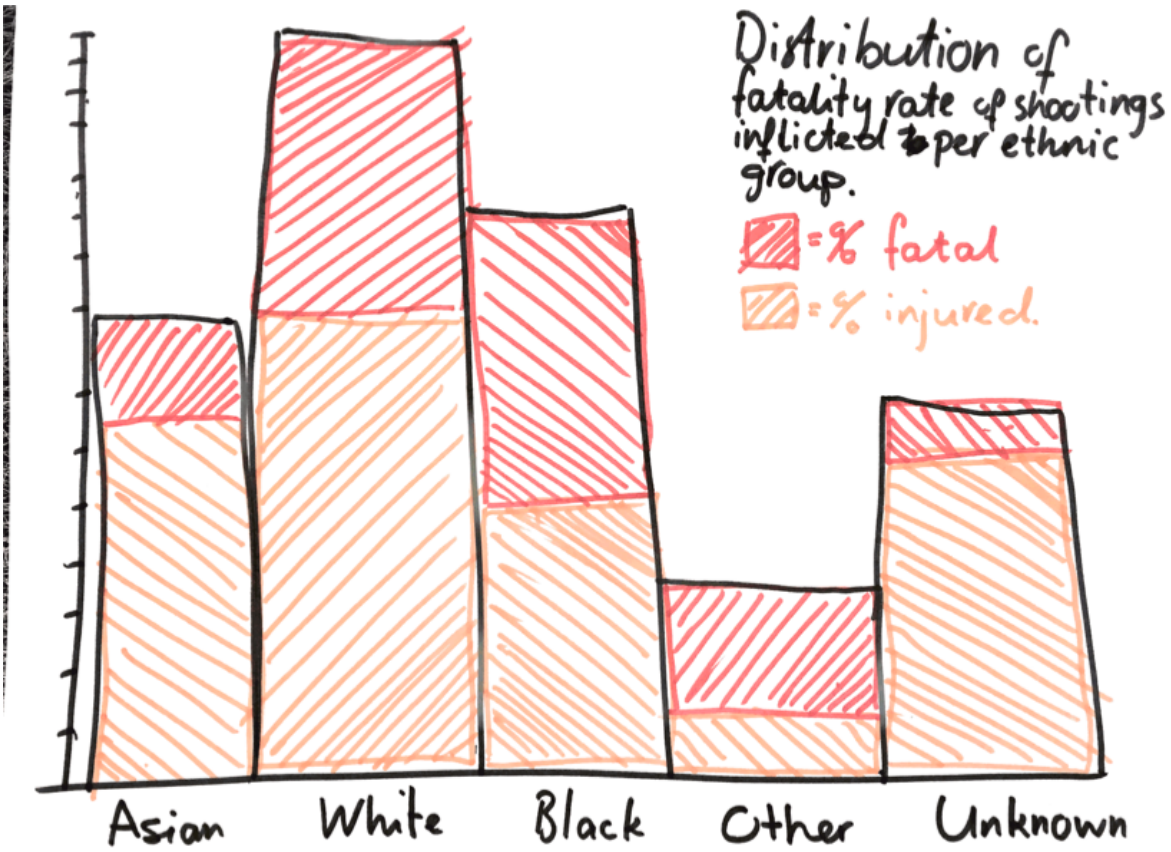


Here showing a scatterplot to link gun ownership to fatality rate, introducing the transition to gun ownership.

In this graph we hope to uncover a pattern between household gun-ownership rates and the adjusted fatality rates of gun violence incidents in a certain year (specifically 2017 in this example). The message we hope to convey is that the fatality rate (or even absolute occurrence) of mass shootings is correlated with the amount of households that have guns in an area. Ultimately, one could argue that driving down gun-ownership rates may be a means of reducing the harm done by mass shootings in the future.



Here we would like to compare the number of deaths before 1998 and after 1998. Since 1998 the Brady Handgun Violence Prevention Act has been active and From the inception of the NICS system in 1998 through 2014, more than 202 million Brady background checks have been conducted.[21] During this period approximately 1.2 million attempted firearm purchases were blocked by the Brady background check system, or about 0.6 percent.[22] The most common reason for denials are previous felony convictions (wikipedia, 2018).



Distribution of fatality rate of shootings inflicted per ethnic group
Bar graph showing the fatality rate of mass shootings per ethnic group. This graph can be used in combination with the map showing motives behind mass shootings. By focussing on mass shootings caused by a hate crime or racism, you can visualize which ethnic group is most affected.

Storyline:

- Introduction (recent news of mass shooting, gun laws, trumpie)
- Showing general graphs about amount of shootings on the map
- Showing bar charts to depict increase or decrease of shootings and fatalities over time
- More specific graph about ethnicity of shooter (changes over time) and the motive for the shooting (e.g. mental, religion)
- Conclusion (or is there a conclusion?