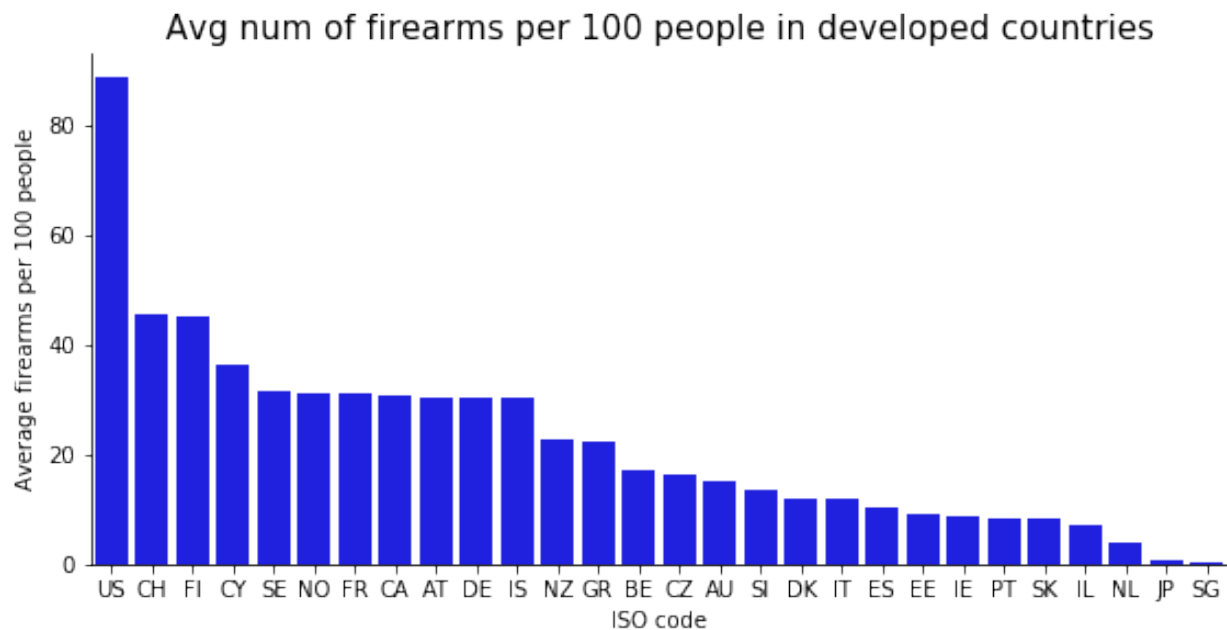


Gun Violence

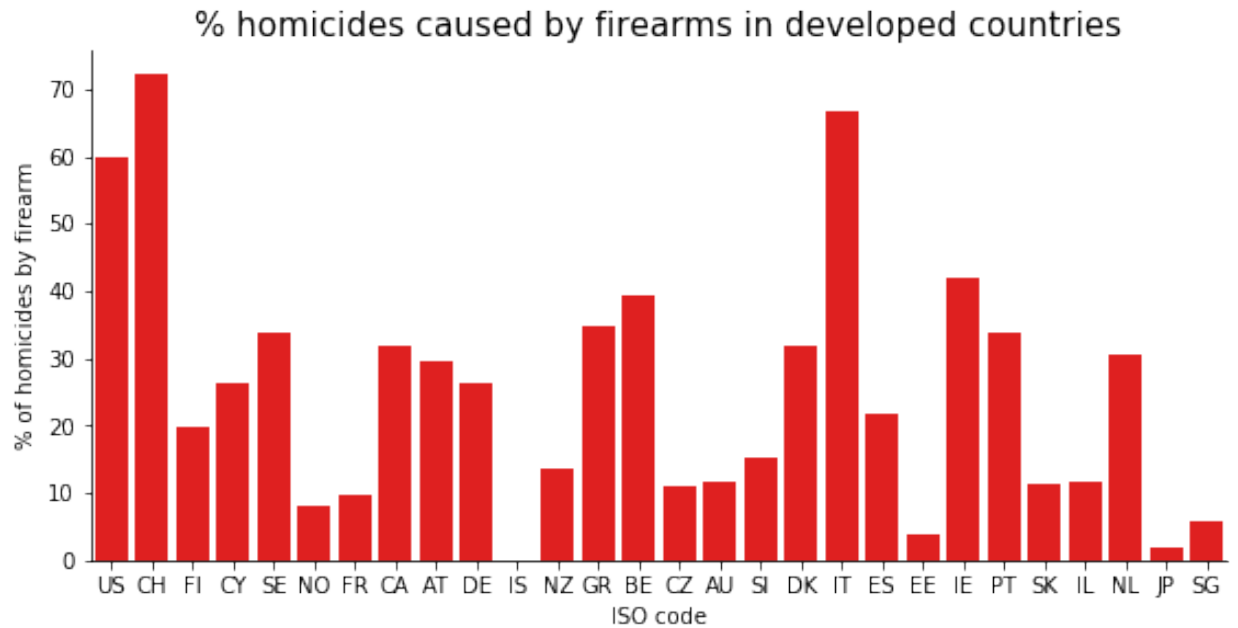
- a unique US problem

Firearm is always a hot topic in the world, its outstanding performances and high power level makes it massively used not only in the army but also in crimes. And when talking about those mass shooting tragedies out there in the world, the discussion would then always lead to the US gun violence and its lack of gun control. In this data product, these following charts and analyses show that why gun violence is especially worried in the US comparing to other developed countries in the world and why gun control is a necessary to stop the tragedies happening.

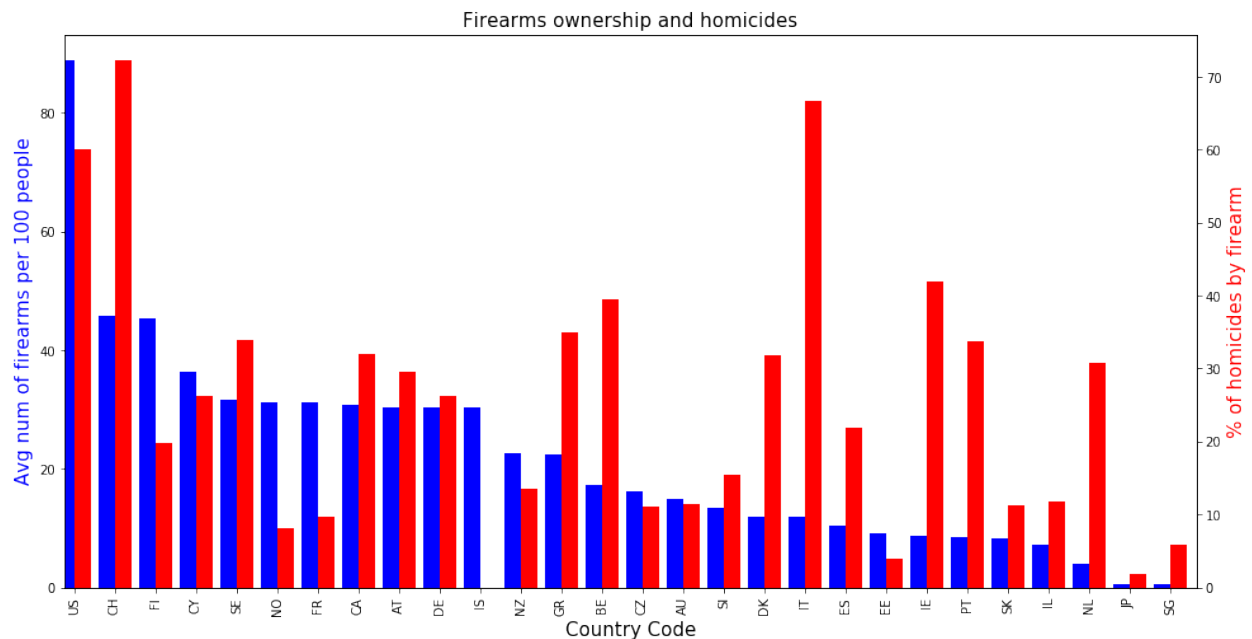
1. Firearms and Homicides [1][2]



Based on the statistics, the average number of firearms per 100 people in the US is 88.8, which is almost equal to one firearm per capita. And Switzerland as the second most in developed country, has an average number of 45.7 firearms per 100 people, which is only half of the US number. With this horrible number of firearms ownership in mind, one would ask how does the homicide look in developed countries?

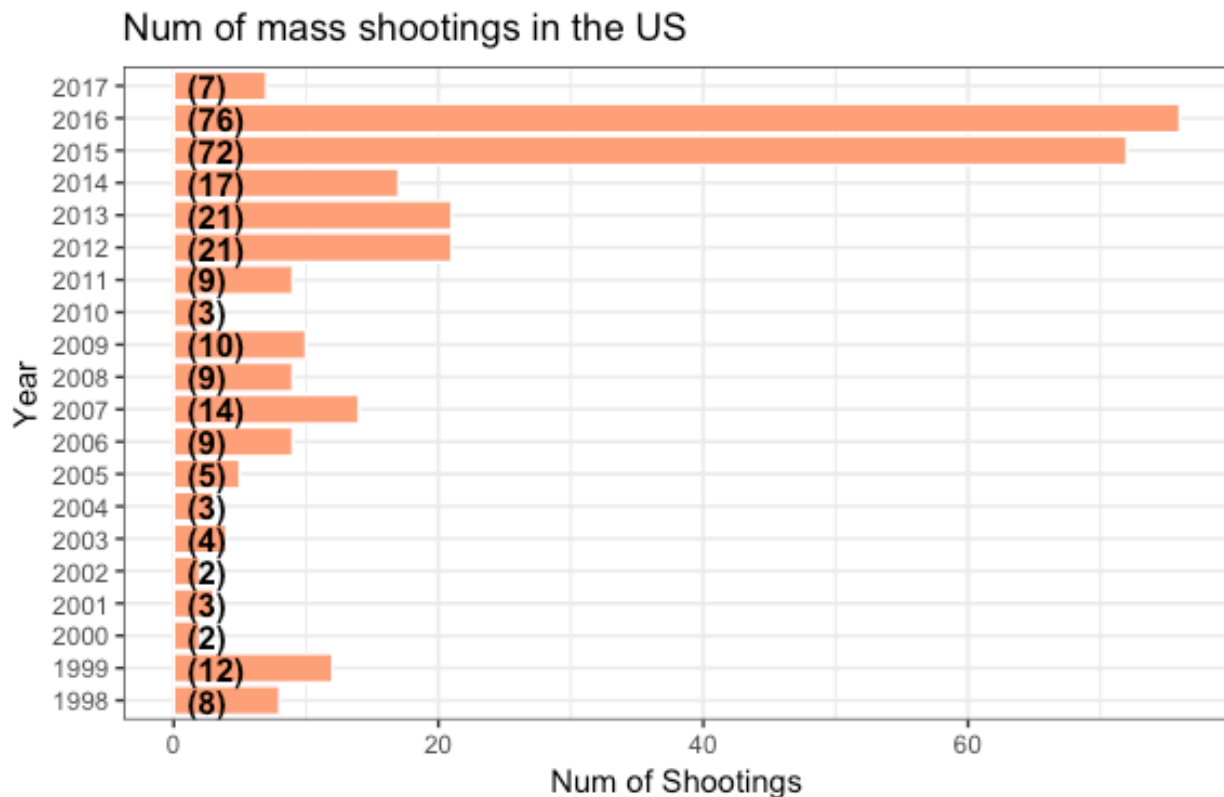


This chart shows that both US and CH are having the highest percentage of homicides caused by firearms in developed countries, which indicates high volume of gun ownership could lead to more firearm homicides. But besides that, one thing noticed here is the percentage homicides caused by firearms is not highly correlated with the gun ownership, where IT can be a good example that it has low gun ownership but large percentage of firearm homicides.

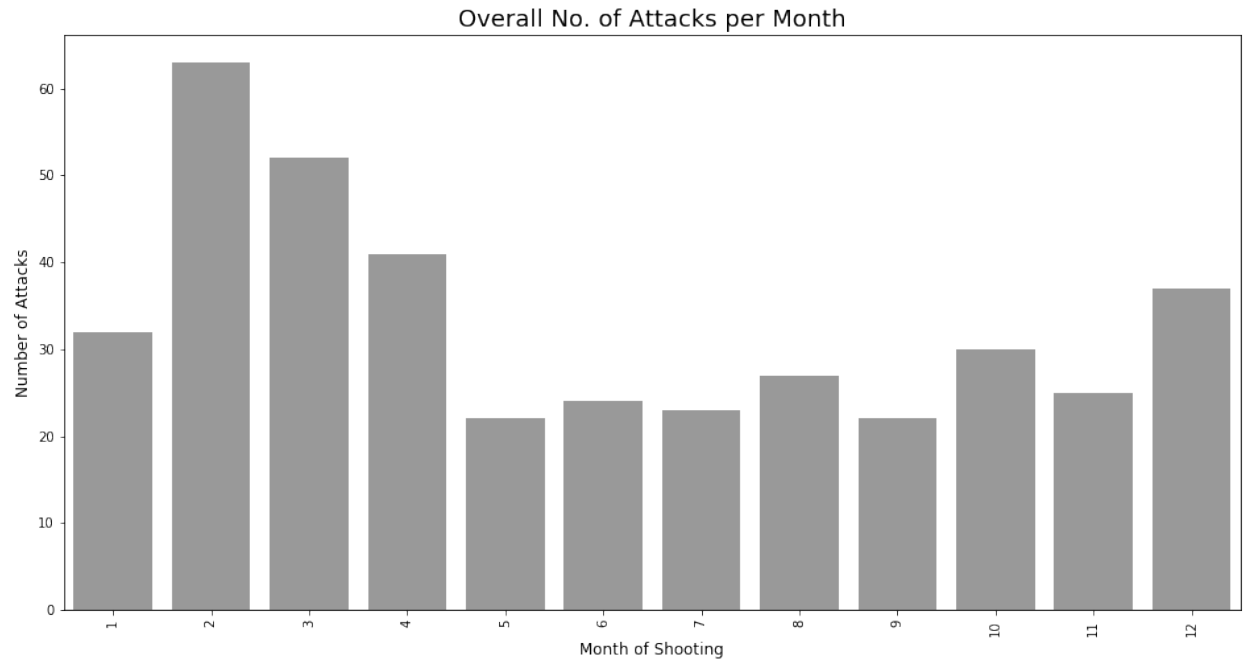


This chart has a better view comparing the previous two charts. As shown in the chart, one can conclude that massive gun ownership could be one of the major reasons leading to firearm homicides, but that might not be the only reason since many developed countries with less gun ownership still has large percentage of homicides caused by firearms.

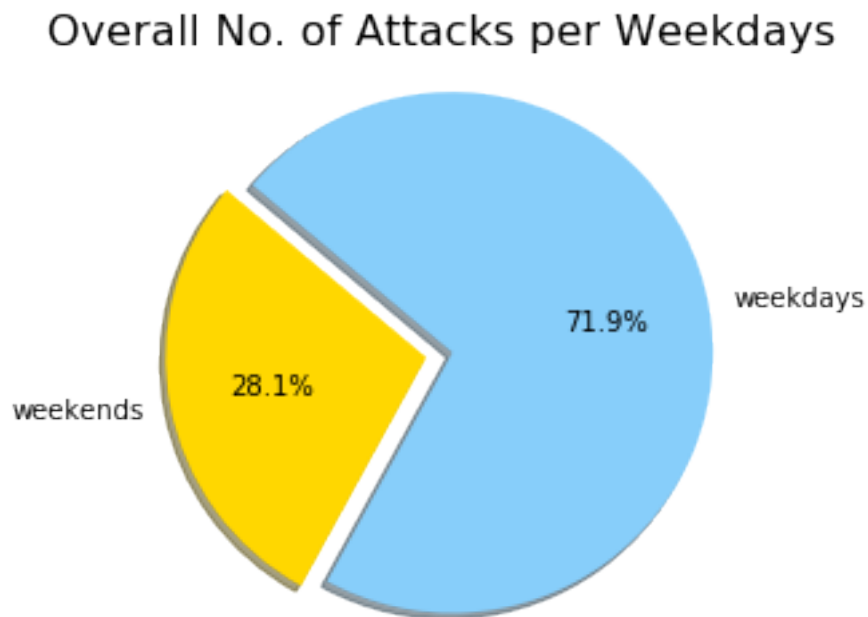
2. Mass Shooting in the US [1][3][4]



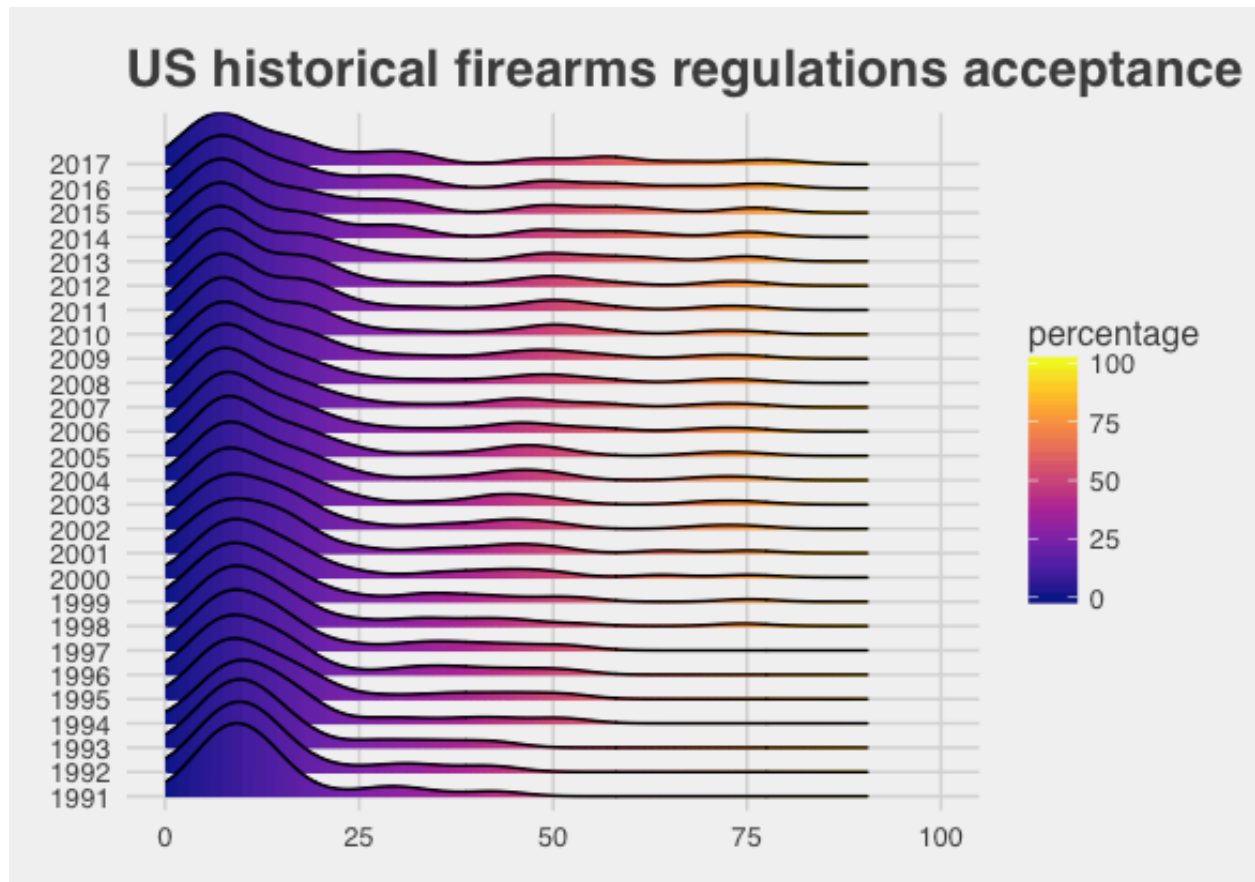
In December 2012, the world known shooting tragedy ‘Sandy Hook’ happened in Newtown, Connecticut. Since this mass shooting happened, many people would then concern that will this be some trigger leading more mass shootings in the US? One can clearly see from the chart that since 2012/2013 there was a huge increase in number of mass shooting in the US. This huge increase in number doesn’t directly reveal any impact of Sandy Hook, but it could still be one of the major reasons driving the changes.



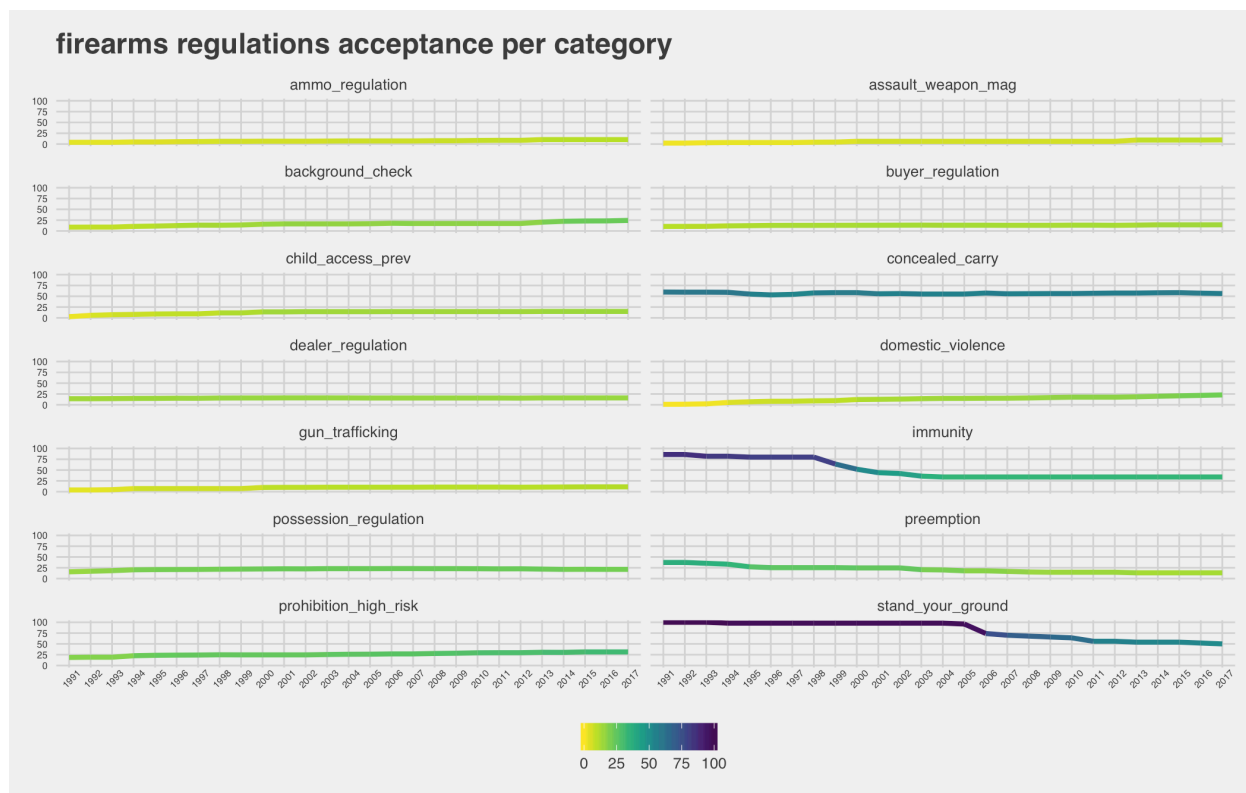
Other than the well known mass shooting social effects, there could still be other reasons. These two charts show the mass shooting events based on time event. The first chart shows there're more mass shooting happening in spring time during the months of February, March, and April. The second chart shows the majority of mass shooting usually happens during weekdays than weekend, which is reasonable because there are more crowds in the public during weekdays than weekends.



3. Gun control [4][5][6]



This chart shows the percentage normalized to the total number of regulations in effect within the US. From the chart it shows the US firearms regulations is still not effective comparing to the historical records. For example, in 2017, there are only less than 15% of all states in the US are above 50% acceptance, where there's only slightly increase but not much difference comparing to the year of 1991.



To investigate more into different categories of firearm regulations, we can tell in general there's no big difference throughout the time for the majority of the firearms regulation acceptance results.

Conclusion:

As a conclusion, gun violence in the US is still a severe problem that needs the whole society's attention. Although the firearm homicide might not be directly driven by gun ownership, the horrible fact of almost one gun per capita in the US should also drive the government's attention. Social media regulations on how to broadcast the tragedy to the public to increase the awareness, but at the same time preventing spreading the "satisfaction" of mass shooting to the criminals could be another project that the society needs to keep working on. Then the most importantly, which at the same time is also the most difficult part, gun control. From the charts we can tell the firearm regulations acceptance rates are not changing much comparing to the increasing mass shooting and firearm homicide rate throughout the years. Although it is true that the citizens have the right to keep them safe on a personal level, which makes gun control less practical, it is then even more important to implement gun knowledge and implement regulations on gun sales to prevent tragedies happening from the source.

Future Data Product Improvements:

I will look into more visualization methods to make the comparisons look more dramatic, and also try not to only use bar chart in the data product. Also after doing the first version I'm thinking maybe I also need to combine other social data to see if there could be other more

interesting but significant results, and also come up with some gun violence solutions other than gun regulations.

Sources:

[1]: https://github.com/allisonyanc/IP_viz/blob/IP_FV_Redesign/IP_FV_codes_YanCao.ipynb

[2]: https://github.com/allisonyanc/IP_viz/blob/IP_FV_Redesign/World%20firearms%20murders%20and%20ownership.csv

[3]: https://github.com/allisonyanc/IP_viz/blob/IP_FV_Redesign/Mass%20Shootings%20Dataset.csv

[4]: https://github.com/allisonyanc/IP_viz/blob/IP_FV_Redesign/IP_FV_codes_YanCao.Rmd

[5]: https://github.com/allisonyanc/IP_viz/blob/IP_FV_Redesign/gun_regulation_raw_data.csv

[6]: https://github.com/allisonyanc/IP_viz/blob/IP_FV_Redesign/codebook.xlsx