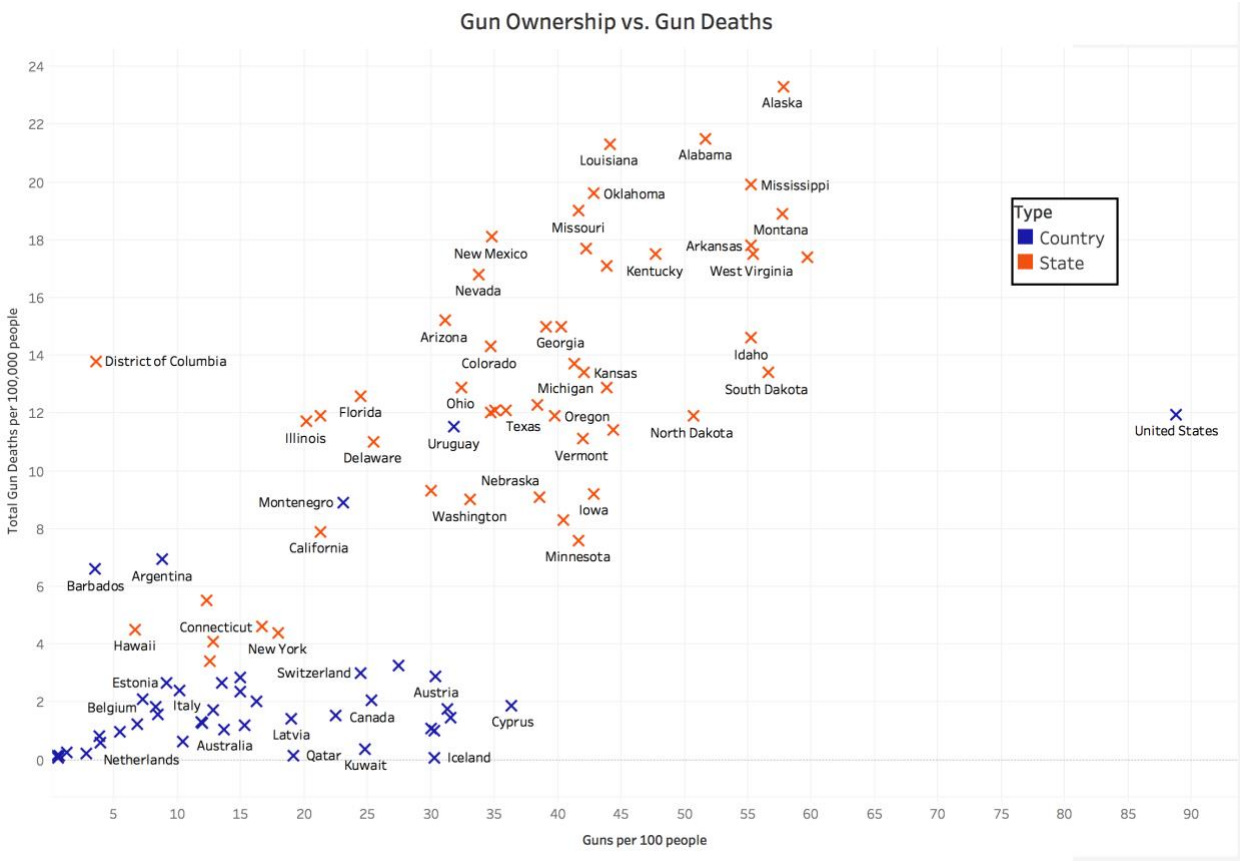
Redesigned Visualizations

Visualization 1 – Graphs 5 & 6

For graphs 5 and 6, I thought that the high levels of both gun violence and gun ownership in the U.S. shown in graph 5 would be more recognizable when overlaid on graph 6 of various developed countries. From an aesthetic side, I also wanted to find a middle ground on colors, as graph #5 is glaringly bright and graph #6 has very little color.

Data:
The original data sources for graphs 5 and 6 are either behind a paywall or outdated so I found more current versions of the same data. Graph #5 used state-level gun deaths per 100,000 people and gun ownership per 100 adults, while the original graph #6 used country-level gun deaths per 100,000 people and gun ownership per 100 people filtered by country High Development Index (https://web.archive.org/web/20130608092702/http://tewksburylab.org/blog/2012/12/gun-violence-and-gun-ownership-further-refinement-and-response-to-reader-comments/). The firearm-related deaths and ownership by country data come from https://en.wikipedia.org/wiki/List_of_countries_by_firearm-related_death_rate. The list of countries by HDI comes from http://hdr.undp.org/en/data. The state-level gun death data comes from https://www.kff.org/other/state-indicator/firearms-death-rate-per-100000/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D. The state-level gun ownership comes from http://demographicdata.org/facts-and-figures/gun-ownership-statistics/.
I combined the datasets into one table in excel which is in the excel folder.

Graph Steps:
I set the column as “Guns per 100 people” (as a dimension) and the row as “Total Gun Deaths per 100,000 people” (as a dimension). I then filtered “2015 HDI” to at least 0.79 (same parameter as original for countries), set the point colors by type (country vs. state), changed the point shape, and added the “Place” name as text.



(https://public.tableau.com/profile/katharine.grant#!/vizhome/Viz1_81/Viz1)

(Note: It seems odd to me that the U.S. data point is so far away from the state data points with regards to gun ownership, but the U.S. value of 88.8 guns per 100 people comes from the same 2007 source as the state-level data.)

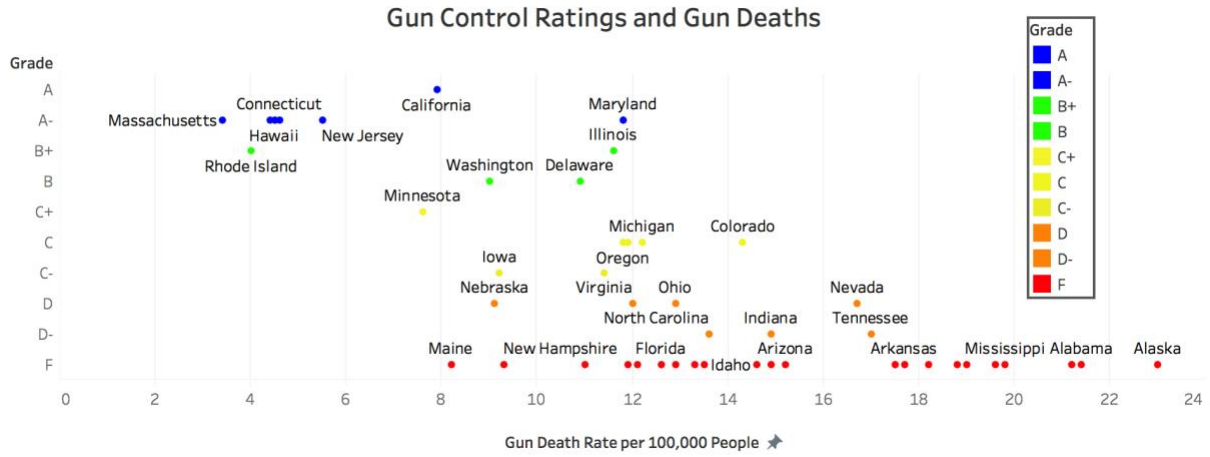
Future Enhancements:
A future feature could be adding trend lines, either one for the countries and one for the states or one overall trend line.
Another enhancement could be merging the data with a regulation grading score or scale so that the audience can see which states have similar restrictions to other countries.

Visualization 2 – Graph 8

In graph 8, I wanted to better visualize the relationship between gun control laws and gun-related deaths. The original had a state-level heat-map of the gun deaths per 100,000 people with the other variable only showing if there were any firearm laws in place. I thought it would be more interesting to instead look at a scale of regulation levels.

Data:
Both the 2017 gun death rate (per 100,000) the 2017 gun law "grade" come from the state rankings table by the Giffords Law Center (http://lawcenter.giffords.org/scorecard/). I then copied the table into excel to use as my dataset (which is in the excel folder).

Graph steps:
I set the column as “Gun Death Rate per 100,000 people” (as a dimension) and the row as “Grade” (as a dimension). I then set the point colors by Grade (a rainbow color scale from A = blue to F = red), set the x-axis to 0-24, and added the “State” name as text.



(https://public.tableau.com/profile/katharine.grant#!/vizhome/GunControlRatingsandGunDeaths/Viz2)

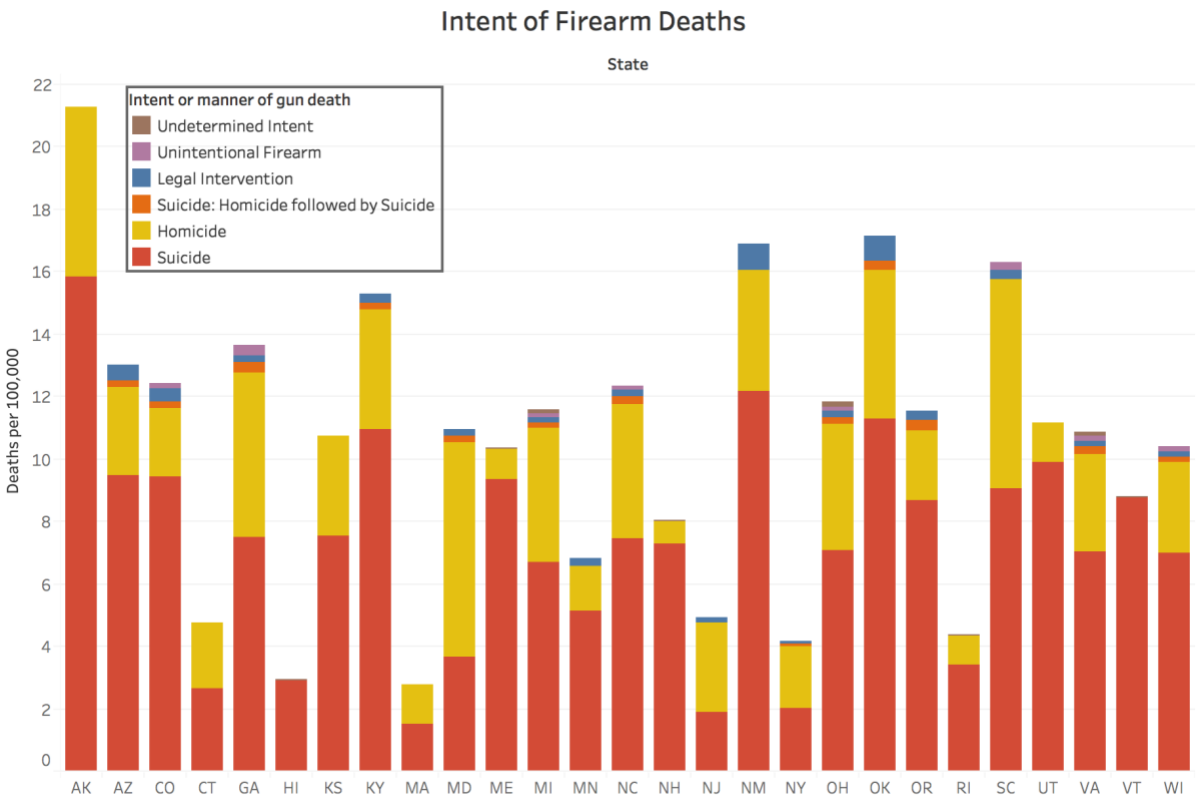
Future Enhancements:
While the data trend is pretty clear, a future enhancement could be adding a trend line which would likely involve converting the letter grades to GPA format so that both variables are numeric.

Visualization 3 – Graph 10

While graph #10 shows that firearm suicides are consistently more frequent than firearm homicides over time, I thought it would be interesting to look at all the different intentions behind gun deaths and by state instead of by year.

Data:
The data for this graph came from the National Violent Death Reporting System (https://wisqars.cdc.gov:8443/nvdrs/nvdrsDisplay.jsp) My parameters were: Age-adjusted Rates, Crude Rates and Death Counts, Use 2000 as the Standard Year; 1. Violent Death Counts and Rates; 2. All Intents; 3. All; 4. Firearm (All); 5. 2015, All Funded States, All Races, All Ethnicity, Both Sexes; All Ages; Down: State, Intent; Across: None. I then copied it into an excel sheet (which is in the excel folder).

Graph steps:
I set the column as “State” (as a dimension) and the row as “Deaths per 100,000” (as a dimension). I then filtered by “Deaths per 100,000” to remove null values and set the bar colors by Intent (and changed the color scale.



(https://public.tableau.com/profile/katharine.grant#!/vizhome/IntentofFirearmDeaths/Viz3)

Future Enhancements:
A future enhancement could be grouping the three other intents into one “Other” category to simplify the bar graph.
Another future feature would be to integrate the state gun law grades to look for a trend in gun deaths by type.