Tyler Young
First Version Redesign

Documentation

The primary purpose of this documentation is to describe, in the hope making reproducible, the work that was done through Tableau. Additionally, there are links to the data files and jupyter notebook file that can be followed to easily recreate the steps taken in the data wrangling process.

To start, below are the links to where the data used in this first redesign came from.
World Crime Data:
http://www.nationmaster.com/au
Gun Violence Data:
http://www.gunviolencearchive.org/
Registered Firearms per State Data:
https://www.statista.com/statistics/215655/number-of-registered-weapons-in-the-us-by-state/
Gun Laws Data:
https://www.kaggle.com/jboysen/state-firearms
World Firearm Data:
https://www.theguardian.com/news/datablog/2012/jul/22/gun-homicides-ownership-world-list#data

I have also uploaded the text files of the data to my github project page at:
https://github.com/tylerhyoung/Data_Viz_Individual_Project/tree/master/First_Version_Redesign/InputFiles

Data clean up, calculations, and merging for this portion of the project were all done using Python in a jupyter notebook to allow for proper documentation and recreation of the results. For the file please refer to:
https://github.com/tylerhyoung/Data_Viz_Individual_Project/blob/master/First_Version_Redesign/Data_Wrangling_Individual_Project_Tyler_Young.ipynb

TABLEAU Documentation:

For use in Tableau, I output several files from python. If you'd like to skip running the python code on the input files, you can download the output files directly from:
https://github.com/tylerhyoung/Data_Viz_Individual_Project/tree/master/First_Version_Redesign/OutputFiles

Data Product 1: Using the "2007_world_guns.csv" file I was able to create a scatter plot in Tableau with a trendline to show the relationship between the number of firearms per 100 people and the number of homicides per 100 people in the top 40 countries. To determine the

top 40 counties, I used the United Nations "Human Development Index" data from 2007. The dashboard shows three graphs, and each is filtered by the rank of the human development index for each country. The high and medium HDI groups have 40 countries each and the low HDI group has the remained of countries in the data set. The groups were created from the "HDI rank" variable and then used as a filter on three separate sheets. Each sheet contained "Firearms per 100" on the columns and "Homicides per 100" on the rows. Null values were also removed through filters. Colors were given to each graph and then resized in to fit on one dashboard.

Data Product 2: "2016_gunlaws.csv" and "2016_violence_by_state.csv" were loaded into Tableau and merged on "state". For the graph, I used "Lawtotal" on columns and "Deaths Per 100k" on rows. I graphed the trend line. I also created a bin for "Lawtotal" by increments of 25 and used "stoplight" color system to move from red to yellow to green as the total number of gun control laws increases, adding a color effect to what is being represented on the x-axis. Additionally, I wanted to improve upon the Vox's articles way of showing if a state had specific gun control laws in place aimed at improving children safety. So using the "Child" variable, which refers to the number of child safety gun control laws a state has, I created bins incremented at 1.5. I then dragged the "child bin" onto size so that larger dots represent states that have more child safety gun control laws.

Data Product 3: "2002_crime_rates_by_country.csv" was used for this data product redesign. "Country" was put on columns and "Total Crime Rate Per Million" on rows for the first graph. "Firearm Murder Rate Per Million" was put on rows with "Country" on the columns on a separate sheet to make the second graph. Both graphs were filtered by "Total Crime Rate Per Million" 5,000 -200,000. A bar graph was used for each and sorted high to low from left to right. Then color was added, and United States was singled out in a different color on each graph. The goal of this dashboard is to show that the United States is not unique in total crime rate, but it is for the rate of murders by firearm.