Analysis

For my analysis I looked at the FBI Gun Data data set. I set out to answer 4 questions:

1. What is the trend of gun buying over time?
2. Are there months that have a heavier concentration of gun buying?
3. What states have the highest gun sales?
    a. What states have the most gun sales per capita?
    b. Do these states have higher rates of handguns or long guns?

To start I segmented out the date to be in an easier format and graphed total sales over the course of time, when I saw that there seemed to be a repeating spike year over year, I graphed the average through the months and found that winter seems to be the time to purchase a firearm whereas there seems to be a lull in sales during the summer months. Next I set out to answer the question of states with the highest gun sales, incorporating the census data. I found that Kentucky had the highest after I made a graph of total gun sales and took the average per month and year. I also found that Kentucky lead the charge for highest gun sales per capita, whereas a state like Texas which has a reputation of being gun-friendly lagged when compared to others and averaged over all its citizens. Finally, I looked at sales of long guns vs handguns and found that long gun sales seem higher on average than handguns and Pennsylvania is leading the states in long gun sales for the time period.

References: https://matplotlib.org/stable/gallery/lines_bars_and_markers/bar_stacked.html