FBI GUN DATA : The data comes from the FBI's National Instant Criminal Background Check System. The NICS is used by to determine whether a prospective buyer is eligible to buy firearms or explosives. Gun shops call into this system to ensure that each customer does not have a criminal record or isn' t otherwise ineligible to make a purchase. The data has been supplemented with state level data from

- The Questions I posed

1. What is the best state in selling guns
2. Is population number and poverty has impact on selling guns in each state
3. Is number of veterans has impact on selling guns

- Description of what I did to answer those questions

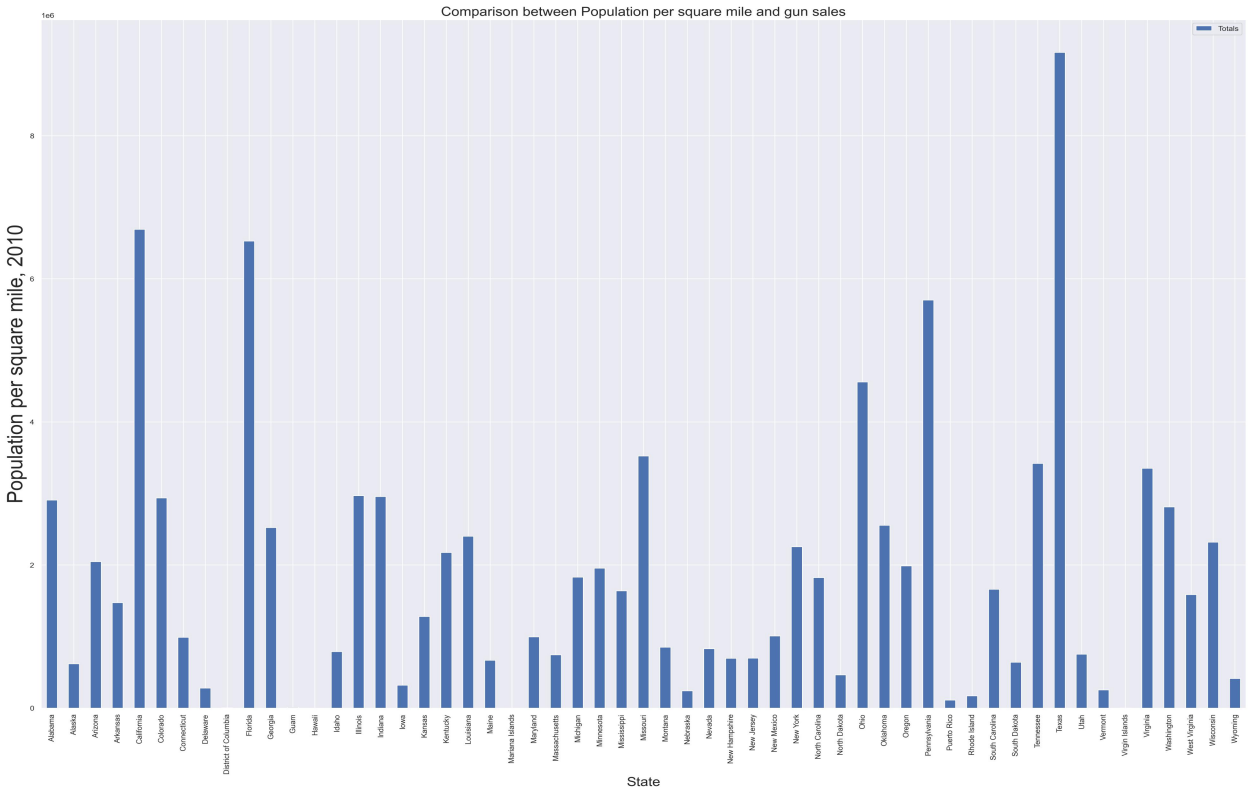
I tried to clean the data as much as possible by finding missing values and outliers and recreated it by taking just the usefull Columns. And I answered the first question by grouping my data with state and sum the selling guns
For census data it was very tricky cause the state was in columns and the rows was the parameters about the state so I chose to use transposing and I merged the gun data and census data
I answered the second question by creating a new dataset which has columns from census data as population and poverty percent and gun data as years and Totals .
I chose data guns from 2010 to 2016 with population columns and poverty columns , I plotted the totals guns and population and poverty to see is those parameters have any effect about Guns selling
I answered the third question by creating a new dataset which has columns from census data as veterans and gun data as years and Totals .

- Data wrangling I did

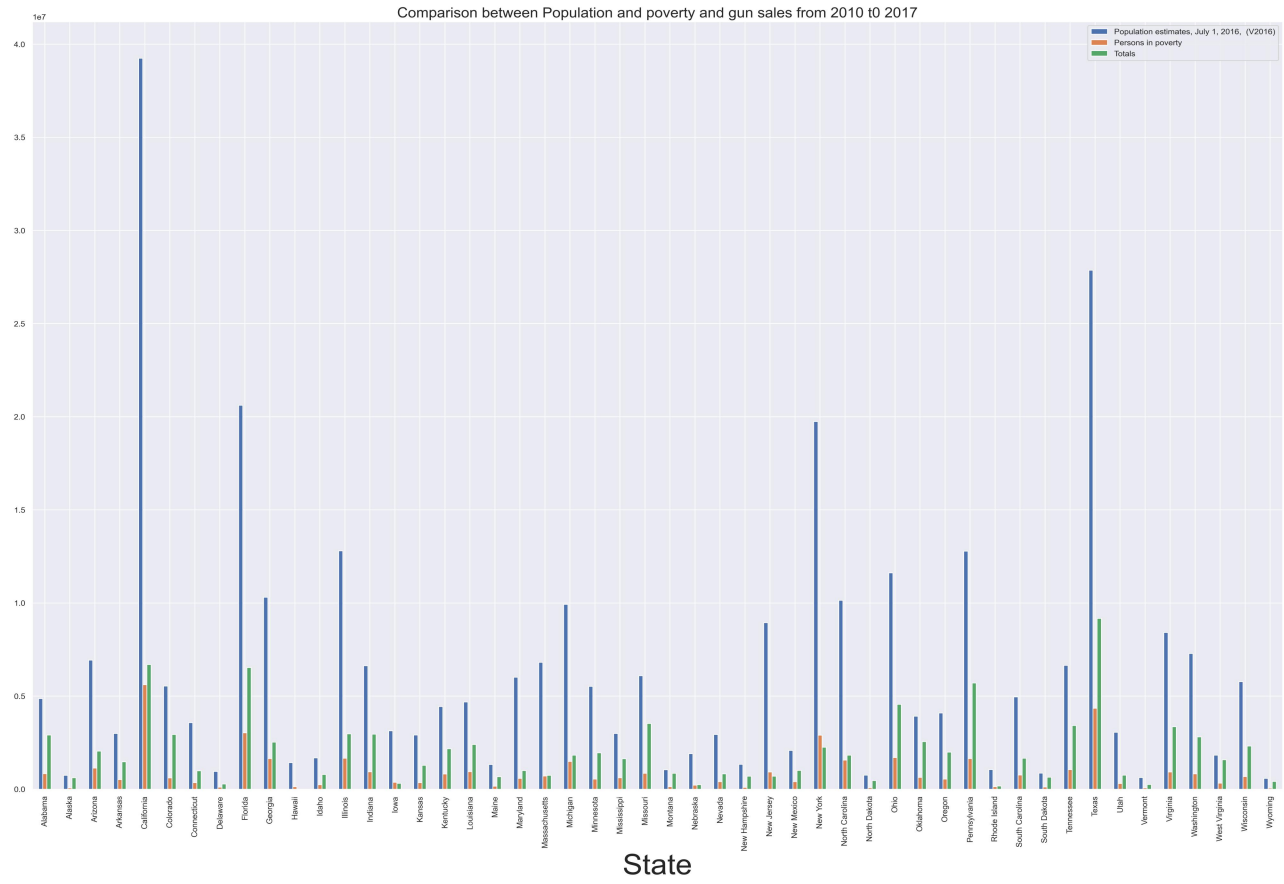
I filled nan values with 0 in gun data and I dropped nan values in census data ,I split date column in gun data to month and year
I dropped 'month', 'permit' , 'permit_recheck','admin','totals','return_to_seller_handgun','return_to_seller_long_gun','return_to_seller_other','returned_other' From gun data
For Census data I dropped Fact Note column and I transformed rows into columns by Transpose the data
I fixed 'Population estimates, July 1, 2016, (V2016)','Veterans, 2011-2015','Persons in poverty, percent' by replacing noisy strings And change it to numerics values .

I merged both data to find is population and poverty and veterans has any impact on Guns selling in each state

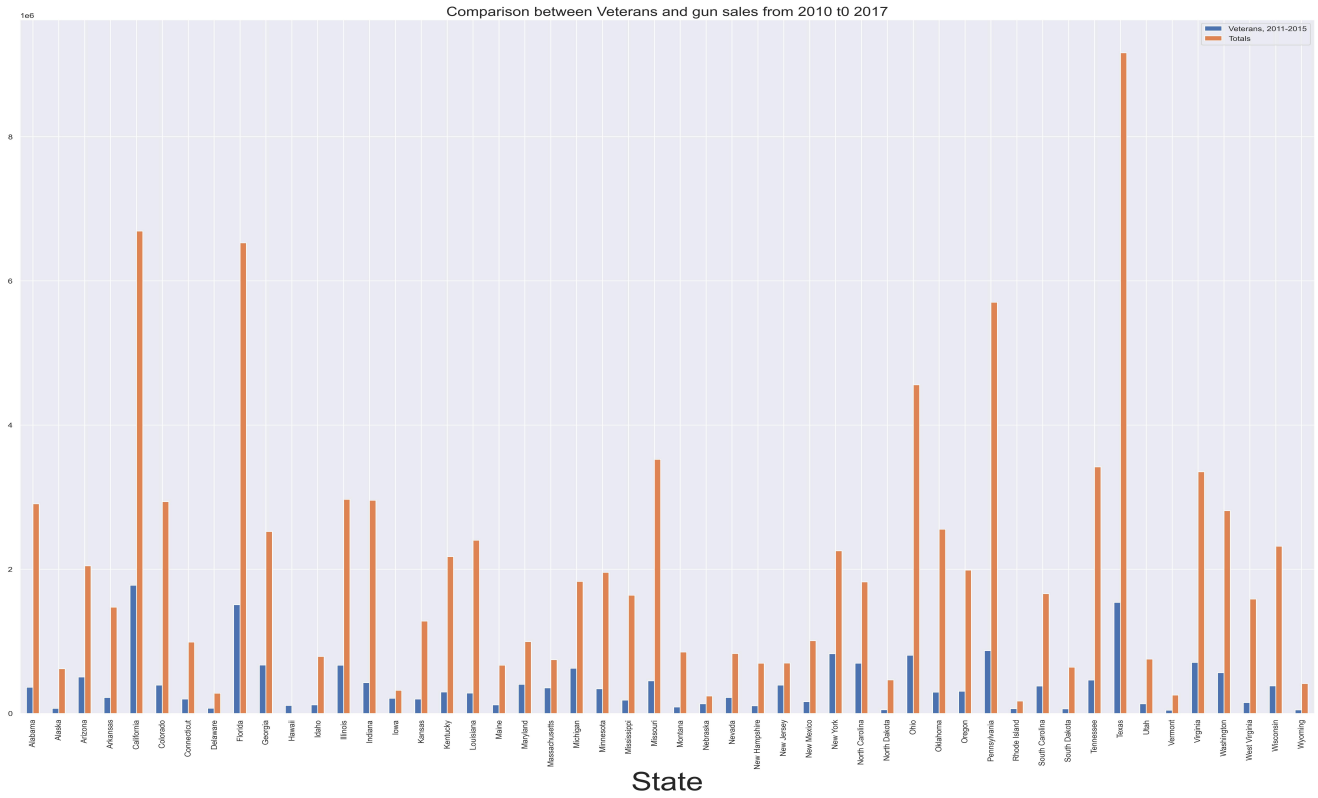
- Plots and summary



As we see here Texas is highest state in selling guns



As we can see poverty and Population have causation for buying guns as in California has top population number
and Texas is second rank of population number but in buying guns Texas is number one that is due to poverty in Texas ,
cause the percent of poverty in Texas is much higher then California



As we can see all states that have more Veterans had more gun selling but it still is not a perfect reason for buying Guns

- Conclusion

This data still has more ways to study it this my first impression about this data ,we need to multivariate analysis to analyse a lot of parameters from census data and show best combination that is responsible from buying more guns