**GUN VIOLENCE - Mass Shootings**

# Reference/Guide on Analysis

* <https://www.bbc.com/news/world-us-canada-41488081>
* <https://en.wikipedia.org/wiki/List_of_mass_shootings_in_the_United_States_in_2023#Monthly_statistics>
* <https://en.wikipedia.org/wiki/Gun_violence_in_the_United_States#Public_opinion>
* <https://k12ssdb.org/all-shootings>
* <https://everystat.org/>
* <https://rockinst.org/gun-violence/mass-shooting-factsheet/>
* <https://www.theviolenceproject.org/mass-shooter-database/>
* Gun owner ship reference - [https://wisevoter.com/state-rankings/gun-ownership-by-state/#](https://wisevoter.com/state-rankings/gun-ownership-by-state/)
* Rampage killing - <https://en.wikipedia.org/wiki/List_of_rampage_killers#Americas>

# Problem Statement

* What happened?
* How severe is this mass shooting spree going on?
* Should govt. take serious action on banning guns

# Business Understanding

* Mass Shooting Definition: FOUR or more shot and/or killed in a single event [incident], at the same general time and location not including the shooter.
* Rampage killers - A spree killer is someone who commits a criminal act that involves two or more murders or homicides in a short time, often in multiple locations. The United States Bureau of Justice Statistics defines a spree killing as "killings at two or more locations with almost no time break between murders".

## Questions

# Hypothesis Formation

# Analytics Approach Selection

* Descriptive

# Data Requirement

* Mass Shooting Data
  + When
  + Where
    - Exact place - Geo location
    - City
    - County
    - State
  + How many killed or injured?
    - Age
    - Gender
    - Ethnicity
  + Suspect Lists
    - Age
    - Gender
    - Ethinicity
* Gun Ownership in US
* Gun laws in US by State – source ???

# Data Collection/Data Acquisition

## Sources

* <https://en.wikipedia.org/wiki/List_of_mass_shootings_in_the_United_States_in_2023#Monthly_statistics>
* <https://www.gunviolencearchive.org/accidental-child-deaths>
* <https://www.cdc.gov/nchs/data_access/VitalStatsOnline.htm#Mortality_Multiple>
* <https://en.wikipedia.org/wiki/List_of_mass_shootings_in_the_United_States#References>
* Fire Arm Ownership - <https://www.rand.org/pubs/tools/TL354.html>
* GUN LAWS - <https://en.wikipedia.org/wiki/Gun_laws_in_the_United_States_by_state>
* [Counties](https://public.opendatasoft.com/explore/dataset/georef-united-states-of-america-county/export/?disjunctive.ste_code&disjunctive.ste_name&disjunctive.coty_code&disjunctive.coty_name&sort=year&dataChart=%3D%3D&location=6,38.91668,-106.24878&basemap=jawg.light)
* Zipcode of cities - <https://data.opendatasoft.com/explore/dataset/georef-united-states-of-america-zc-point%40public/table/>
* <https://news.gallup.com/poll/357317/stricter-gun-laws-less-popular.aspx>

# Data Understanding

# Data Pre-processing

# EDA and Analytics

## Descriptive Analysis (Planned)

* Total Affected by Year
* Total Affected by County
* Injured vs Dead percentage
* Dead by year and county – bar split – horizontal
* Killed and injured location – interactive map
* Killed and injured GIF/VIDEO by Year – map and bar
* Killed and injured GIF/VIDEO by Year – map
* Histogram – killings
* Killed and Injured
* Heat Map
* Density map
* Report creation and drill down
* How much killings have happened due to Gun Violence
  + By Gender
  + By Age
  + By Race
* Casualties = Injured + Killed

## Notes

* Summary with map and general insights
* Increase and decline in incidents, killed, injured
  + Explain the increase or decrease
* Averages – killed, injured, incidents,casualties
  + By incident
  + By state
  + By year
  + By county
* Distribution of the data ( by people)
  + Incidents – no category to find distribution
  + Killed
  + Injured
* ~~Try different Maps for counties~~
* Most no. of incidents , killed, injured
  + in any state (all years)
  + in any state (any given year)
  + in any single county (all years)
  + in any single county (in any given year)
  + in a single day (all years)
  + in a single day (in any given year)
* Least no. of incidents , killed, injured
  + in any single county (all years)
  + in any single county (in any given year)
  + in a single day (all years)
  + in a single day (in any given year)
  + in any state (all years)
  + in any state ( any given year)
* Pivot matrix by year
* Weekdays or weekends (day of the week – combined)
* Deadliest mass shooting incidents
  + Explainer
* State wise Review Gun Law state wise and compare with the data

<https://www.gun-tests.com/news/rhode-island-gun-laws/>

<https://www.usconcealedcarry.com/resources/terminology/types-of-concealed-carry-licensurepermitting-policies/unrestricted/>

<https://en.wikipedia.org/wiki/Gun_laws_in_the_United_States_by_state>

<https://wisevoter.com/state-rankings/states-with-magazine-restrictions/#:~:text=The%20states%20with%20magazine%20restrictions,hold%20at%20any%20given%20time>.

* % of people against and for holding guns – people views
* Questionnaire – should guns be abolished totally – what should be done!
* School Shooting
  + Join by incident ID with main data and check
  + Children killed/injured
* Childrens killed/injured
  + Join by incident ID with main data and check
  + Age group 0-11
* D

## Deadliest Shooting

### 2nd Dec 2015

<https://en.wikipedia.org/wiki/2015_San_Bernardino_attack>

### 12th June 2016

<https://en.wikipedia.org/wiki/Orlando_nightclub_shooting>

28.519622410639162, -81.37682486933005

### 1st October 2017

2017 Las Vegas shooting

<https://en.wikipedia.org/wiki/2017_Las_Vegas_shooting>

36.09564849026908, -115.1714637666971

### 5th November 2017

<https://en.wikipedia.org/wiki/Sutherland_Springs_church_shooting>

29.273452182314305, -98.05572869214619

### 14th February 2018

<https://en.wikipedia.org/wiki/Parkland_high_school_shooting>

### 3rd August 2019

<https://en.wikipedia.org/wiki/2019_El_Paso_shooting>

### 24th May 2022

<https://en.wikipedia.org/wiki/Robb_Elementary_School_shooting>