

School Shootings

Team members: Adriel, Jayce, William, Vivian, Christian



Background on Topic Selection

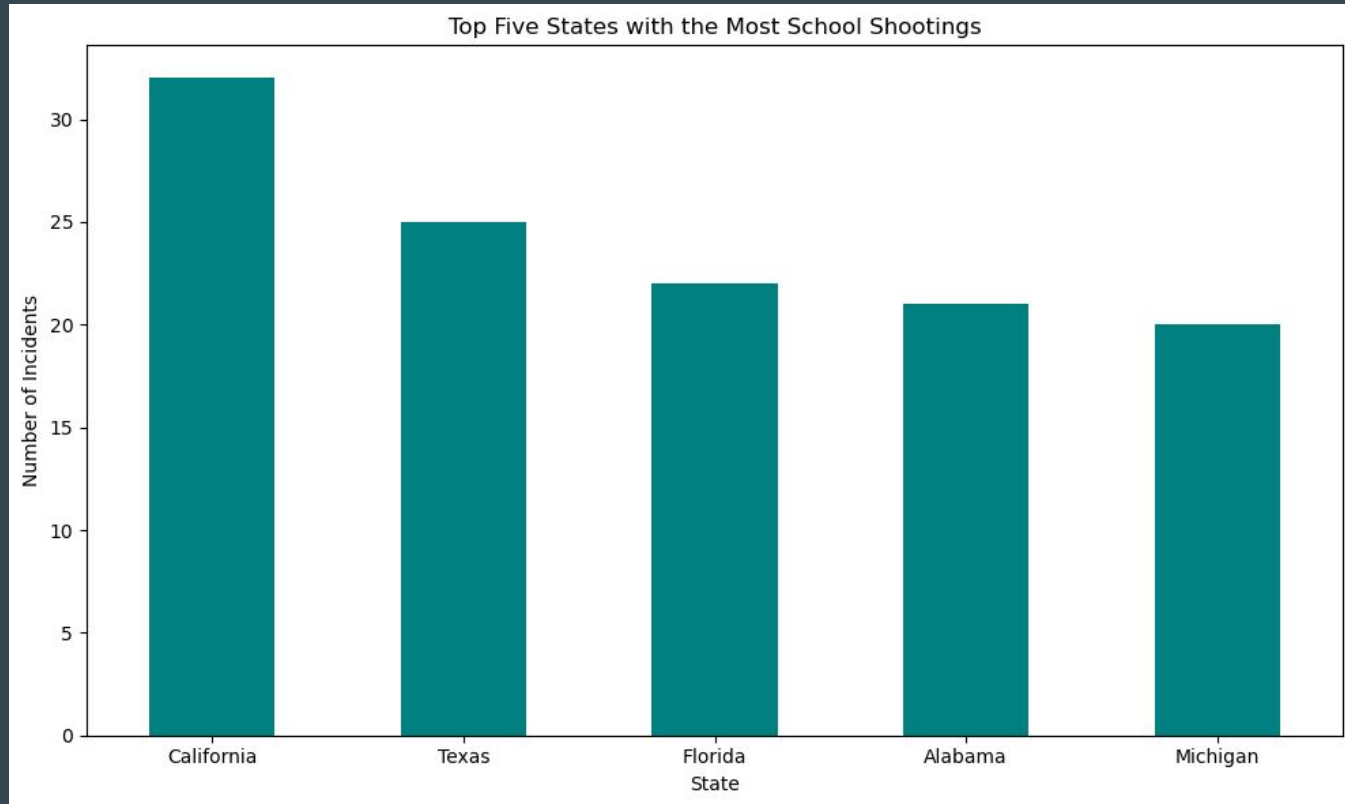
- Why did we decide school shootings?
- Initial datasets that intrigued our group:
 - Education, Policing, Experiments/Social Psychology
 - Additional datasets we considered: Food, Media/Applications, sales (Luxury watches, top sports shoes)
- Found an intersection between our interests:
 - Education + Policing —————> School Shooting Data

Guiding Questions: What we want to know about School Shootings

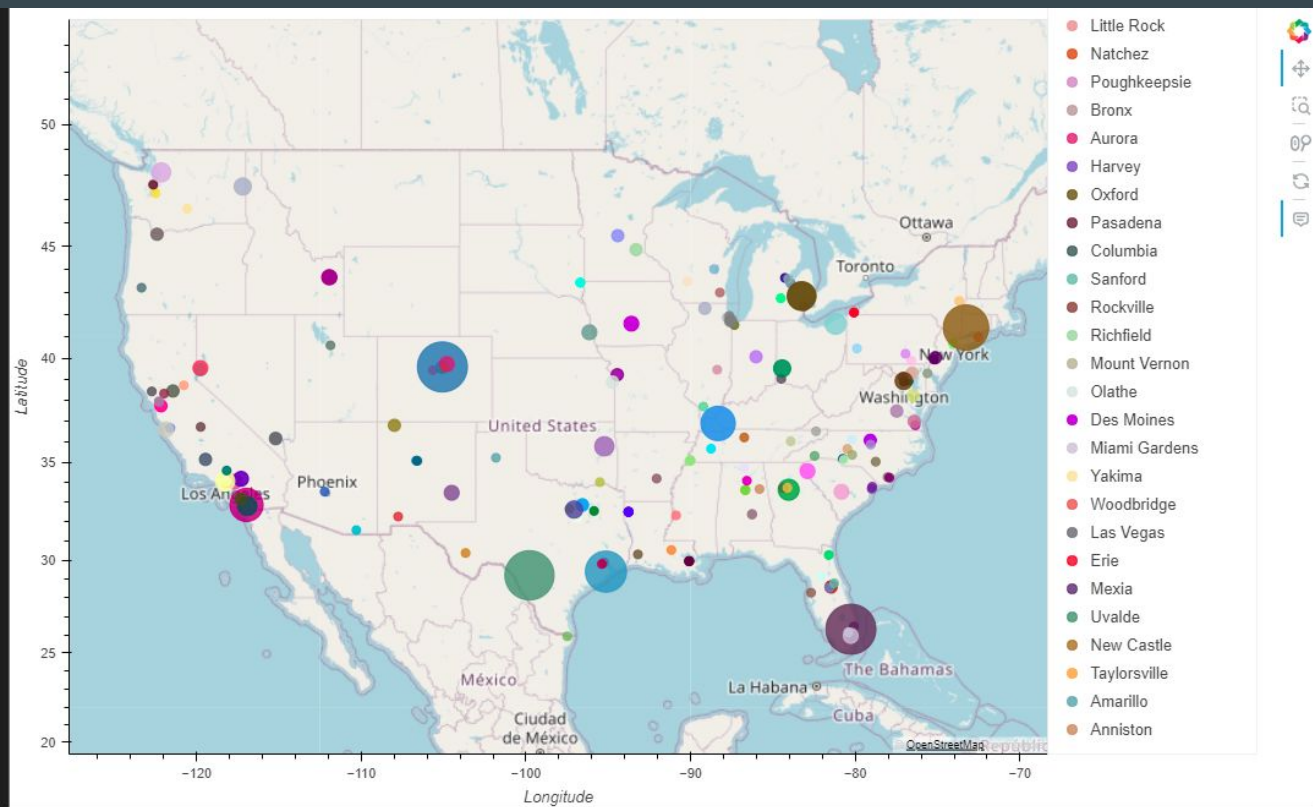
- Which regions or states have experienced the highest and lowest incidences from 1999 - 2023?
- How have the yearly and monthly trends of school shootings fluctuated over the past few decades, and what seasonal patterns are evident?
- What are the patterns among different incidents in terms of time of day (morning vs. afternoon), and weapon type?
- Are certain types of schools, such as elementary, high schools, or private institutions, more vulnerable to school shootings?
- What traits are common among perpetrators (Age, gender, planned vs. unplanned, etc.)?
- What risk factors or warning signs, such as history of violence, bullying, abuse, are prevalent in our perpetrators?

Geographical Findings

Graph of states with the most incidents



Graph of Incidents by State

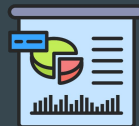


Geographical Analysis:

Which states have the most shootings?

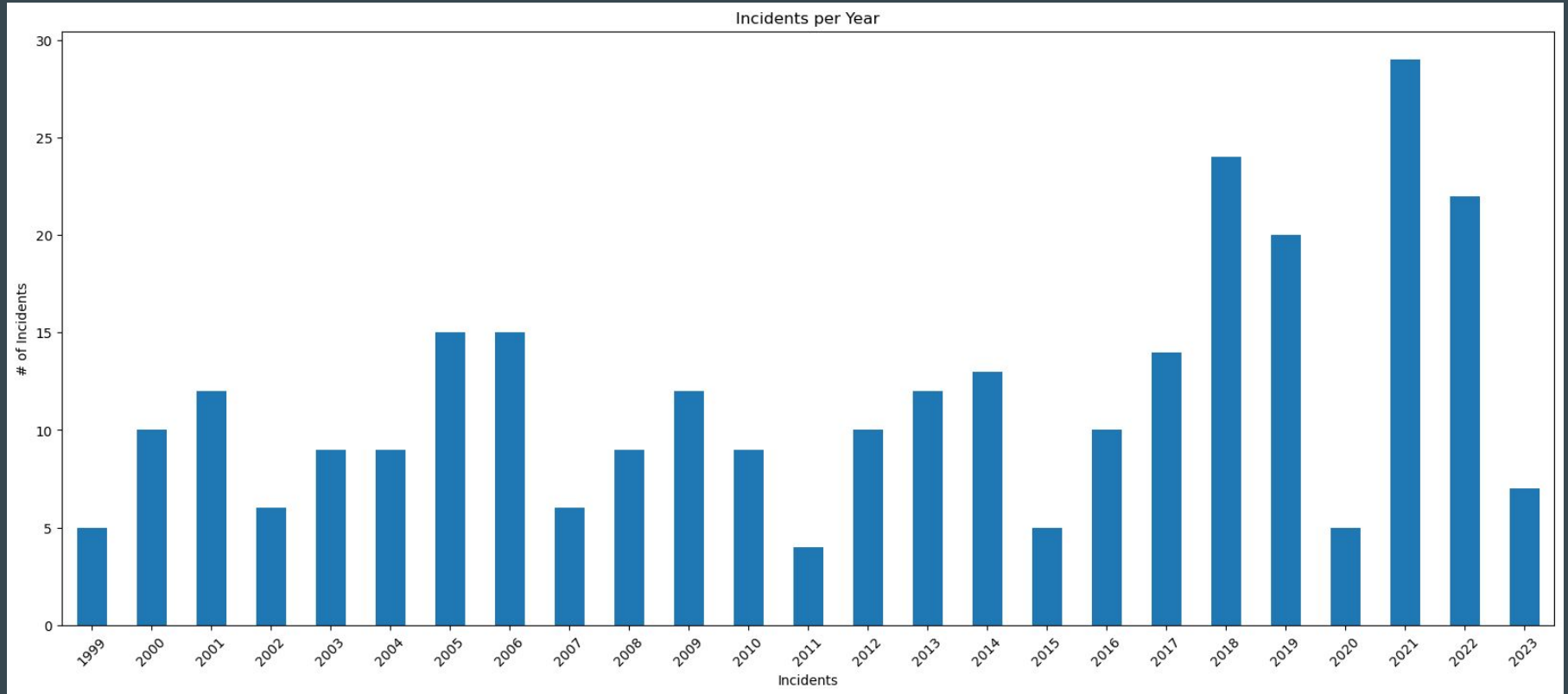
School shootings happen more often in California and Texas

School shootings happen less often in New Hampshire and North Dakota

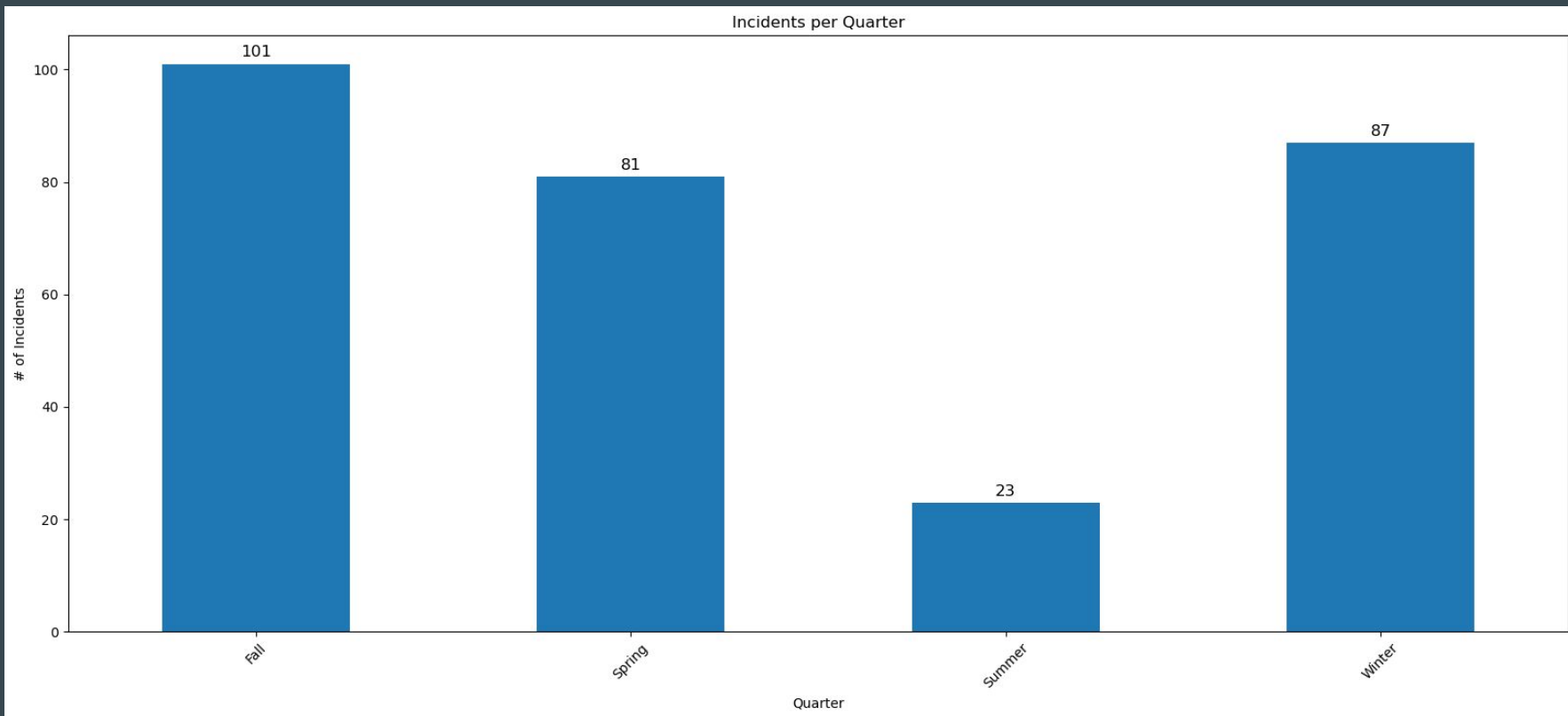


Findings by Year & Season

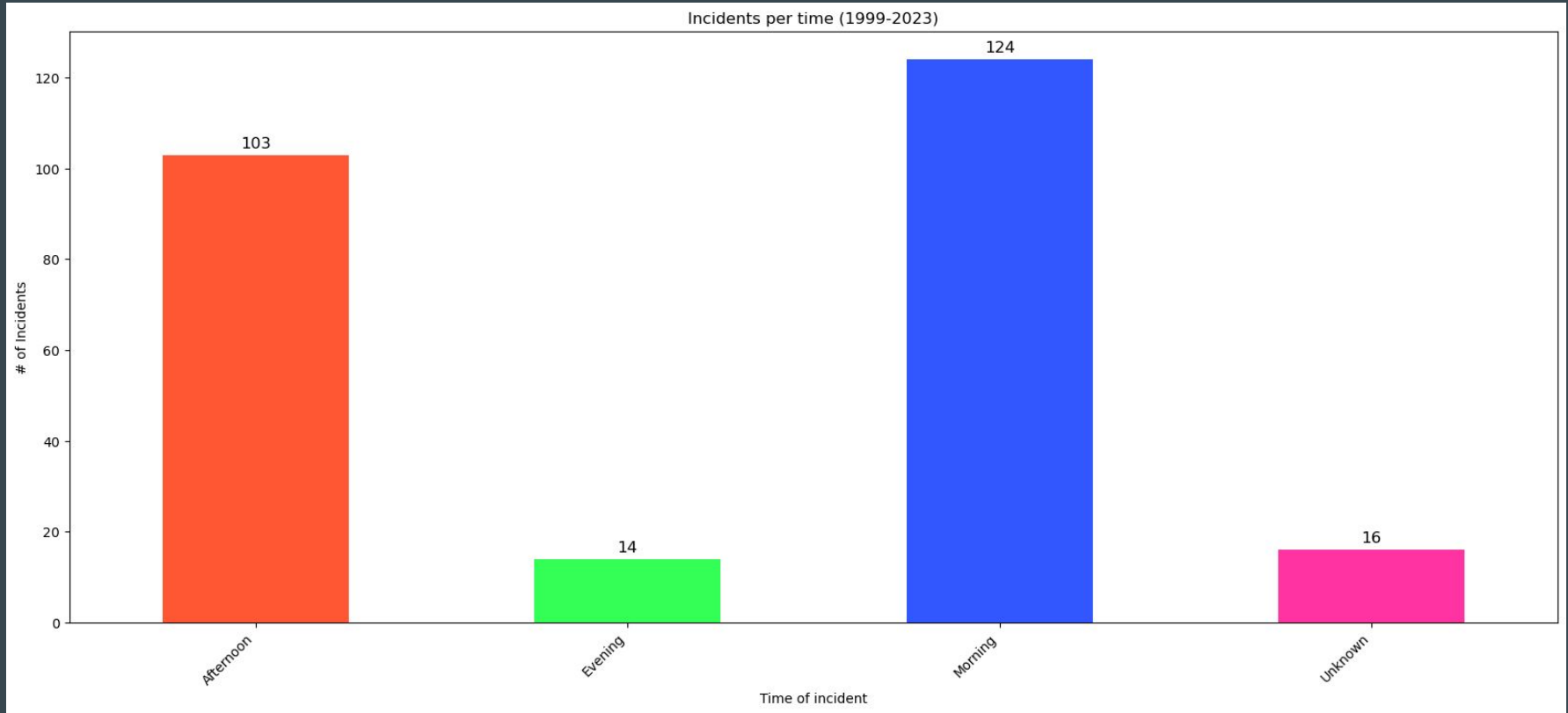
Graph of incidents by yearly trend



Graph by season



Graph of Incidents per Time of Day



Year & Season Analysis:

Have school shootings
always been as prevalent?

2011 has had the lowest amount of shootings in the past 25 years.

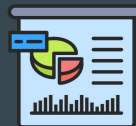
School shootings rise and fall over the years each having their own curve.

The most school shootings happened in **2021**.

The average amount of shootings has increased slightly over the past 25 years.

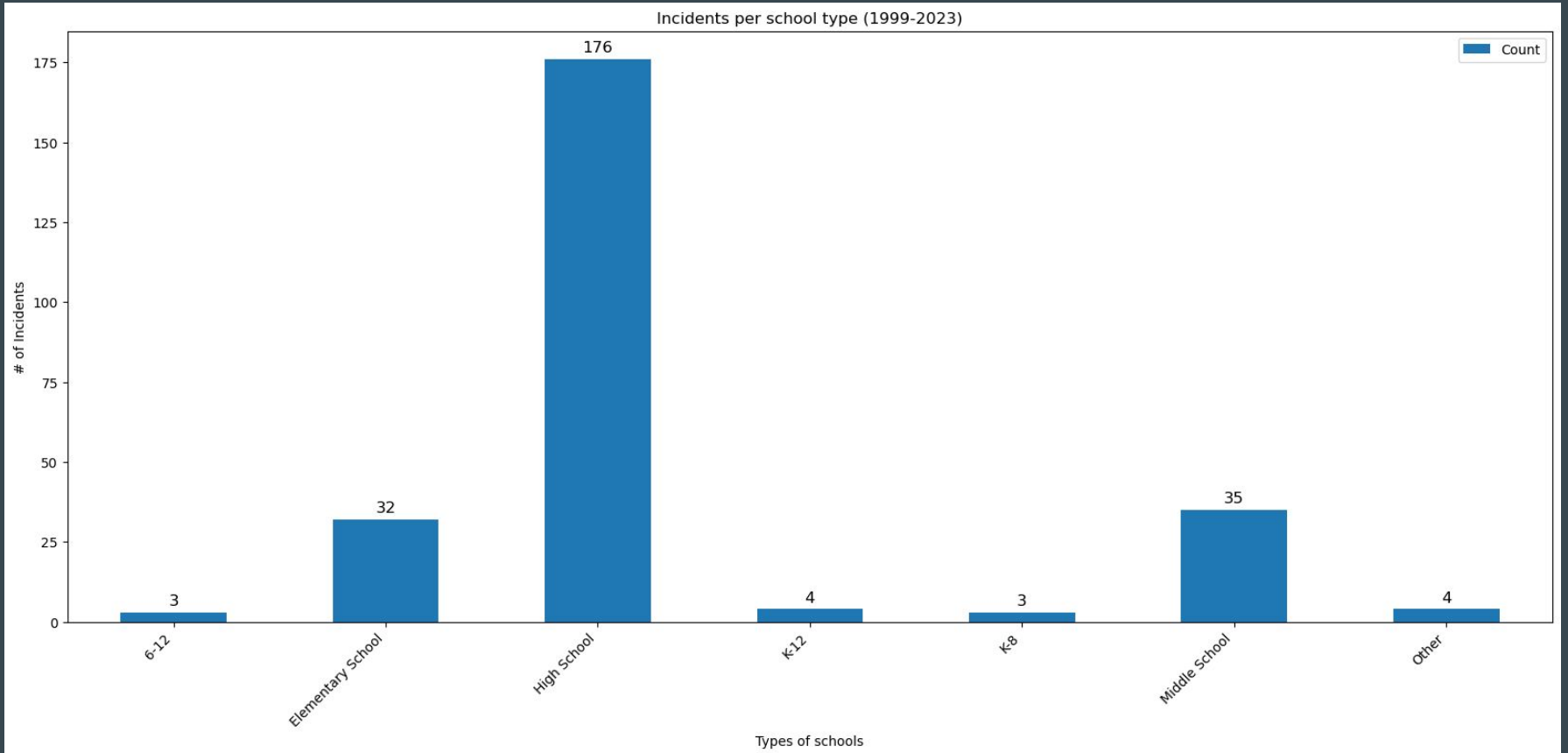
Over the course of these years fall is the most common time for shootings.

While the most common time for incidents are during the morning, afternoons are just as common.



Types of School Findings

Graph of most targeted school types



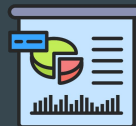
Type of Schools Analysis:

What kind of schools get hit the most often?

High schools are the overwhelming majority of school types targeted.

Elementary Schools & Middle schools follow with around ~30 incidents

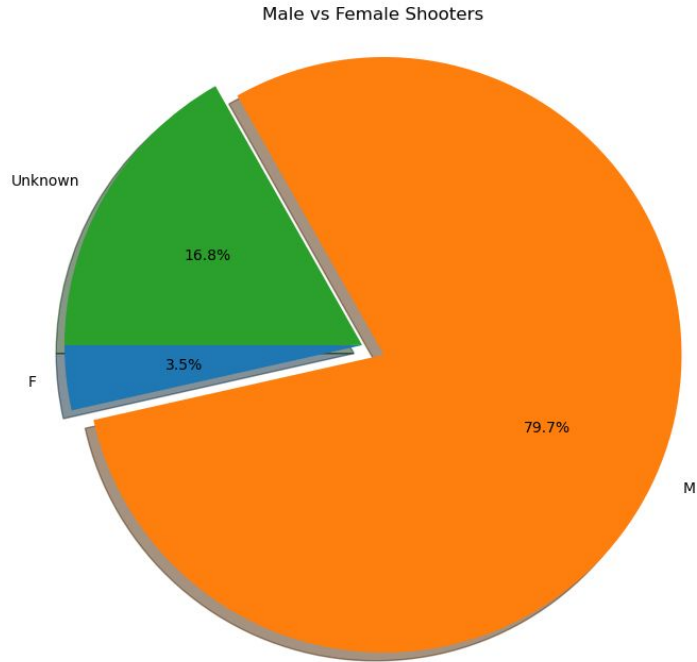
Combined grades, are unique, they could fall into some of these other categories but based on the grouping of grades, decided to keep them separate. Even added together, they show the smallest number of incidents.



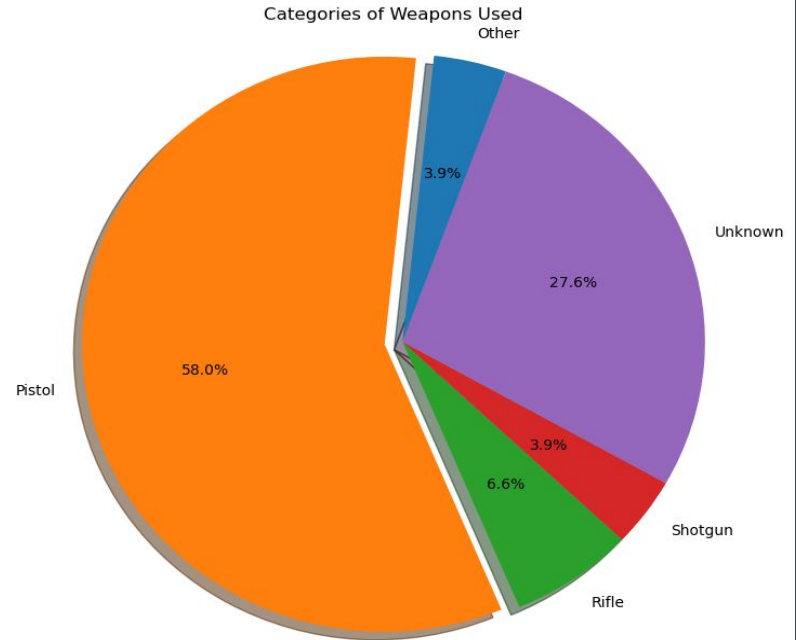
Shooter Traits Findings

Graphs of similarities Continued

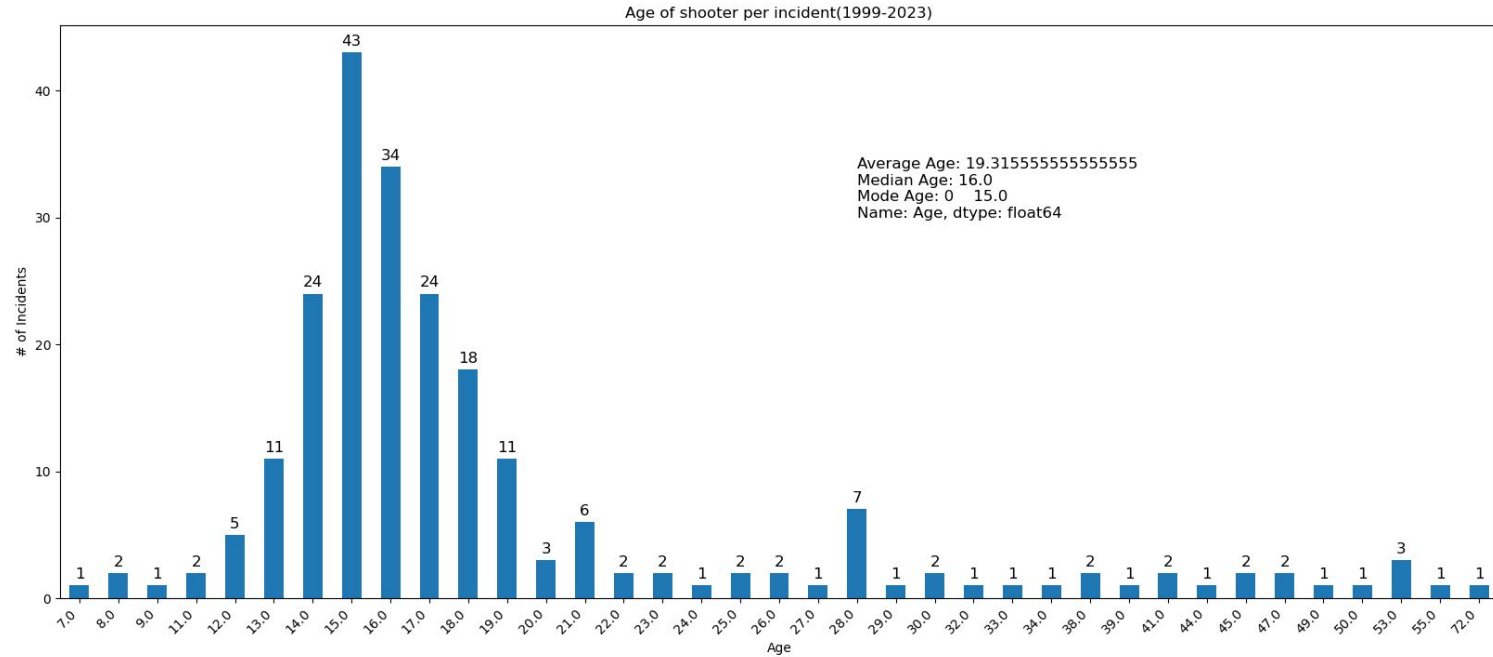
Male: 204 incidents
Female: 9 incidents
Unknown: 43 incidents



Pistol: 149 incidents
Rifle: 17 incidents
Shotgun: 10 incidents
Other: 10 incidents
Unknown: 71 incidents



Graph indicating age of shooter



Shooter Trait Analysis:

Are there any similarities
between different shooters?

Men shoot far more schools on average than women.

Handguns are the prime weapon of choice for school shooters by over half.

Most school shooters are still teenagers the with the most shooters by incident at 15 years old.

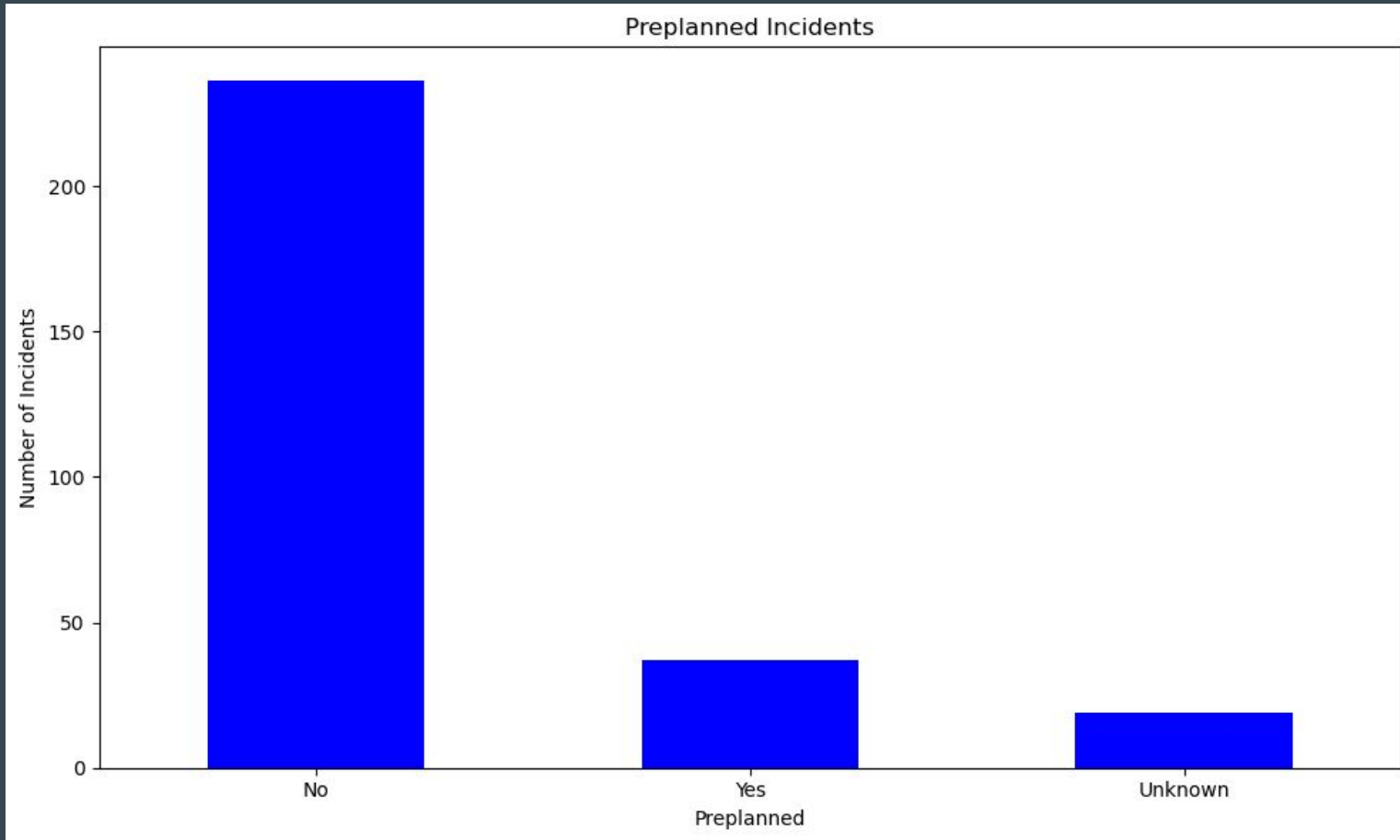
Youngest age of shooter was 7

Oldest age of shooter was 72

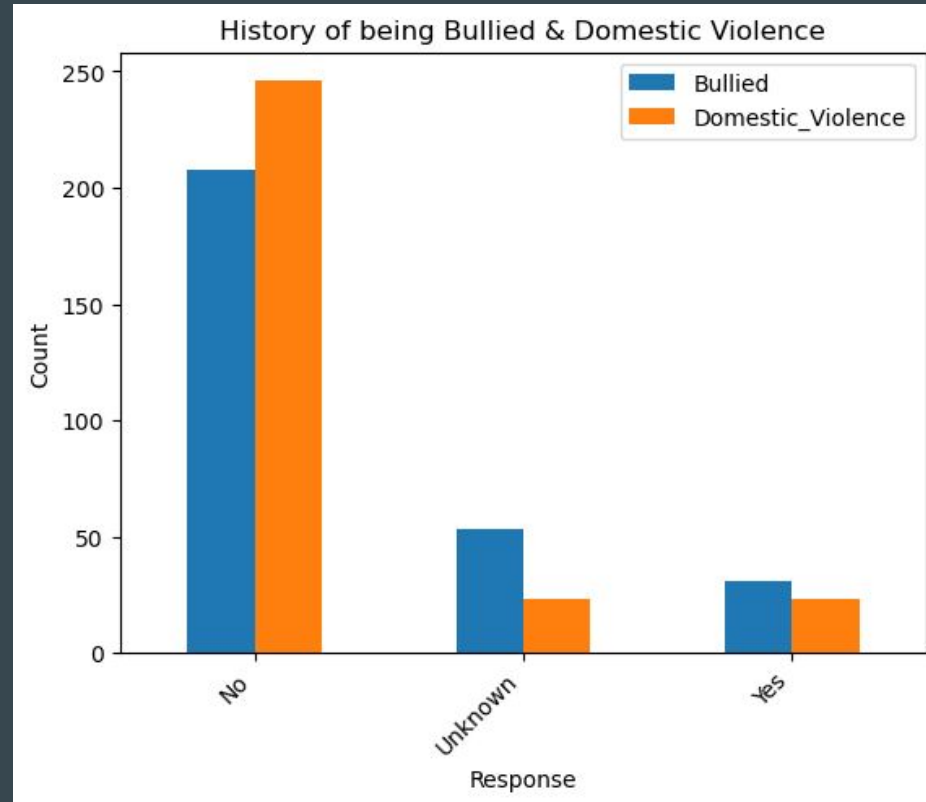


Shooter History Findings

Graph of pre-planned shootings



Graphs of history of being bullied and domestic violence



Shooter History Analysis:

Is violence common around the shooter, what is their mental state?

Data shows that most incidents are not planned out with any plan of attack, they simply walk into the school and fire looking to injure and kill.

Most shooters don't actually see violence around them as shown in the data. Most shooters are not involved in gangs, see abuse in the home, or are bullied by their classmates.



Wrapping Up

Is there anything we can do
to stop/prevent these
incidents?

By knowing the times when shooters are more likely to strike we can be better prepared for the worst.

By researching yearly data we can make conclusions on why some years were more safe than others.

By knowing what kinds of schools are attacked the most, we know better where to budget for security and for counseling.

Knowing that violence from the home or from outside factors does not have a meaningful factor towards shootings is a valuable wake up call.

By acknowledging the data and striving to understand more we can be better prepared to fight against school shootings.

What have we learned
and how can we use
it?

Thank You

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