

Gun Violence in America

1982 - 2023



Our Team

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The purpose of this project is to analyze major gun shooting incidents that have occurred in the United States over the last four decades.

Examined data on:

- The number of incidents.
- Location where they occurred.
- Breakdown of the causalities.

Process of the project.



Analysis

Conducted exploratory data analysis to gain insights into the underlying patterns and relationships in the data.



Discovery

Data source: Kaggle

File type: csv

Link: [Gun Violence, USA](#)



Transformation (ETL)

Loaded csv file, changed data types, filled in missing data and exported dataframe to database.



Visualization

Created charts and maps to help demonstrate the findings of the data analysis.

TECHNOLOGIES USED

Displayed data analysis charts with Apexcharts and interactive map with Leaflet.



5 - Apexcharts, Leaflet

Used to design the user interface for the web application.



4 - JavaScript, HTML, CSS

Flask framework served as the backend API.



3 - Flask

Stored data in SQLite database.



2 - SQLite

Pandas library was used for ETL.



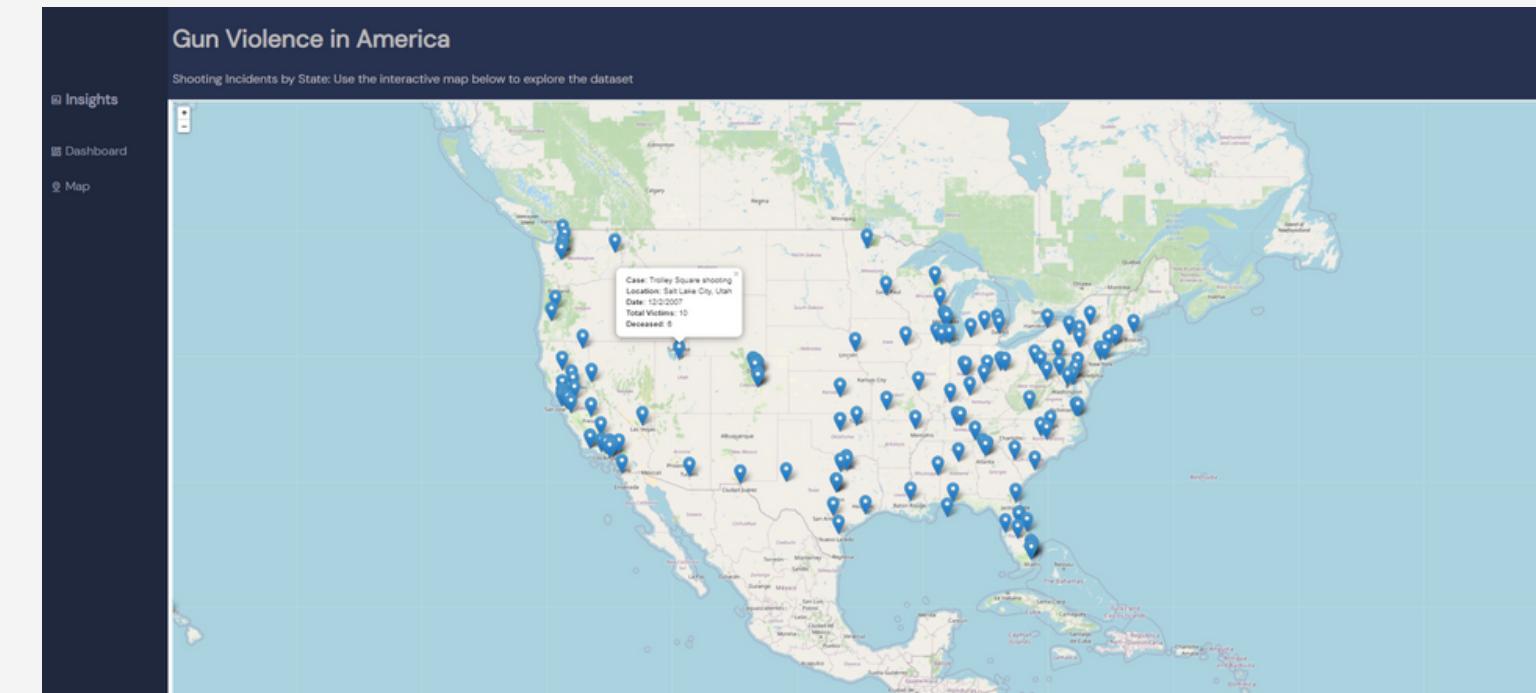
1 - Pandas/Python

Overview of the web pages



Dashboard

Displays KPIs and charts of data analysis results.



Map

Displays the distribution of the incidents across the states.

Key challenges

- Small data size caused limitations to analyze and present data.
- Null values and quality of data limited the identification of significant trends.
- Outlier record affected presentation of data.

Recomendations

- Join additional datasets to gain more insights.
- Add filters to dashboard and map to make visualizations more interactive.
- Exclude outlier from certain charts.



Demo