The Washington post : Analyzing Patterns of Police Shooting Data

Data Visualization – CIS 568

Srividya Srinivasula

Santhoshi Priya Sunchu

Meghana Thota

Ashvitha Banala

Project Description

What?

Our project involves a detailed analysis of the fatal police shootings database maintained by The Washington Post. We thoroughly examined each incident recorded in the dataset, which includes comprehensive details such as the date, location, and the demographics of individuals involved (age, race, and gender). Our analysis also extends in exploring the circumstances surrounding each event, including the presence of weapons, signs of mental illness, and whether these incidents were captured on body cameras. By mapping these variables in various visual formats, we aim to uncover patterns and trends that provide deeper insights into the nature and frequency of fatal police shootings across the United States.

Why?

Our project is driven by the urgent need to address the complex issues surrounding fatal police shootings in the United States. With growing concerns over police accountability and transparency, there is a pressing demand for rigorous analysis of available data to shed light on underlying systemic factors contributing to these incidents. By conducting a thorough examination of The Washington Post's database on fatal police shootings, our goal is to provide empirical evidence that can inform evidence-based policy reforms aimed at reducing the occurrence of such tragic events. Additionally, our analysis seeks to cultivate greater understanding and dialogue within communities impacted by these incidents, ultimately working towards fostering trust and accountability between law enforcement agencies and the public they serve.

How?

Our project takes a comprehensive approach to analyze data on fatal police shootings sourced from The Washington Post. Leveraging advanced data visualization techniques and statistical analysis, we thoroughly explore intricate details and patterns within the dataset. Utilizing programming languages like JavaScript, we develop interactive visualizations and dashboards that dynamically represent insights. Through this systematic process, we aim to extract meaningful information to inform evidence-based policy recommendations and foster informed discourse on the critical issue of fatal police shootings in the United States.

Transitioning from Data Collection to Visualization

This project, focusing on fatal police shootings in the United States, has strategically evolved from its inception in Phase 1 through to the current phase, maintaining a strong alignment with its overarching goals of enhancing data transparency and informing public policy.

In **Phase 1**, our foundational goal was to establish a robust dataset that shed light on the scope and details of fatal police shootings. This phase concentrated on compiling comprehensive data from the Washington Post, addressing critical issues such as underreporting and the need for greater accountability in law enforcement. The main objective was to create a thorough and detailed collection of data that could serve as the foundation for in-depth analysis and informed discussions.

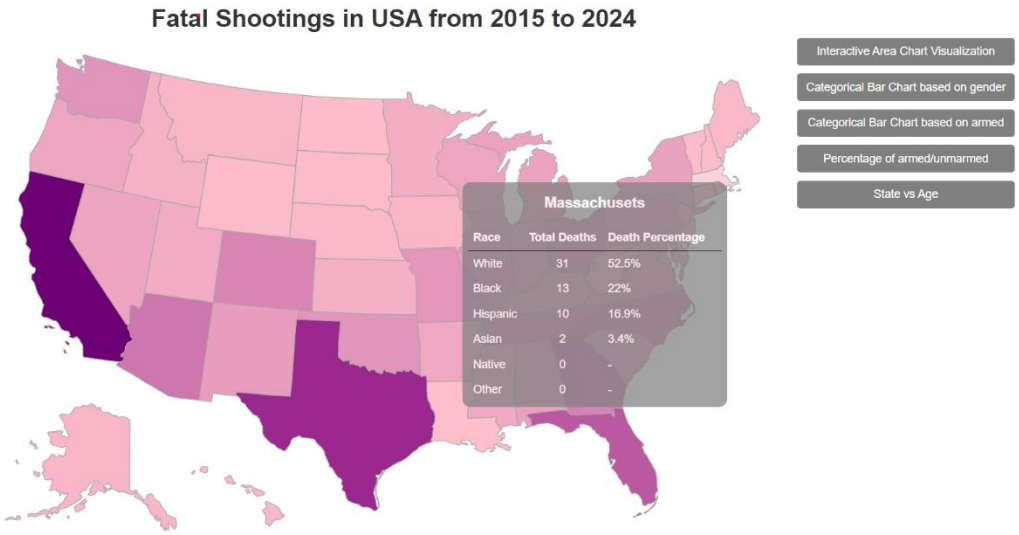
Transitioning into **Phase 2,** this project expanded upon the initial dataset by incorporating advanced data visualization techniques using D3.js. This phase is aimed at making the data not only more accessible but also more engaging through interactive visualizations. The enhancements will allow us and users to explore data dynamically, examining trends over time and across various demographics such as race and age. This phase bridged the gap between static data collection and interactive analysis, enabling a deeper understanding of the patterns and factors contributing to fatal police shootings.

The project's Phase 2 has several interactive visualizations to enhance the analysis of fatal police shootings data. The **Interactive Area Chart Visualization** displays the number of shootings by race over time, equipped with a year slider that dynamically updates to illustrate trends within racial groups. The **State wise Age Distribution of Incidents** shows the age distribution of shooting victims by state, highlighting geographical variations. On the **Main Page,** we featured a detailed map of the USA complemented by several navigation buttons on the right side. Hovering over the map reveals a tooltip that provides essential details about each incident. These buttons facilitate easy navigation to other pages, where the users can explore more in-depth visualizations and data insights. The **Categorical Bar Chart** explores various categories such as mental health status, fleeing behavior, and arms use by gender, allowing for detailed demographic comparisons. Lastly, the **Percentage of Arms Usage** Visualization focuses on the types of weapons involved in shootings, broken down by year through an interactive dashboard, enhancing understanding of the circumstances surrounding these incidents.

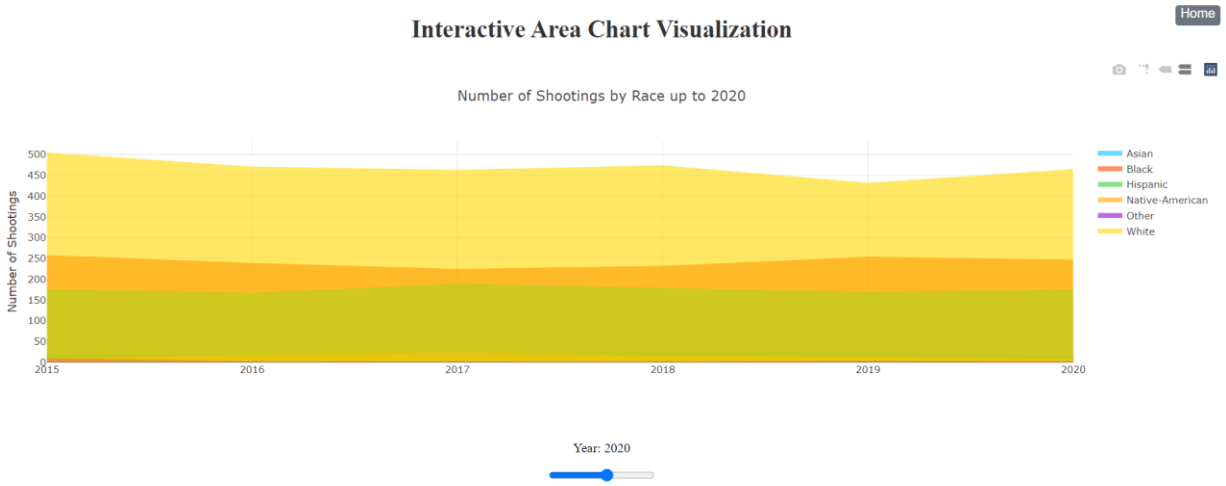
The evolution of the project from basic data collection to the development of interactive visualizations demonstrates a strong dedication to making complex information accessible and engaging. This transition underlines our project's aims to promote transparency and accountability within law enforcement by providing clear, actionable insights that encourage community involvement and oversight.

Framework's Screenshots

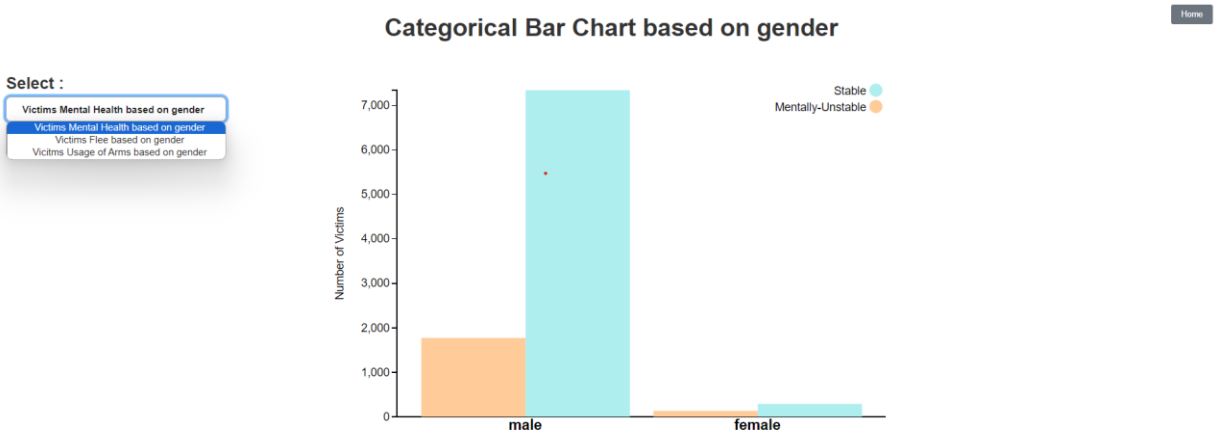
Main Page :



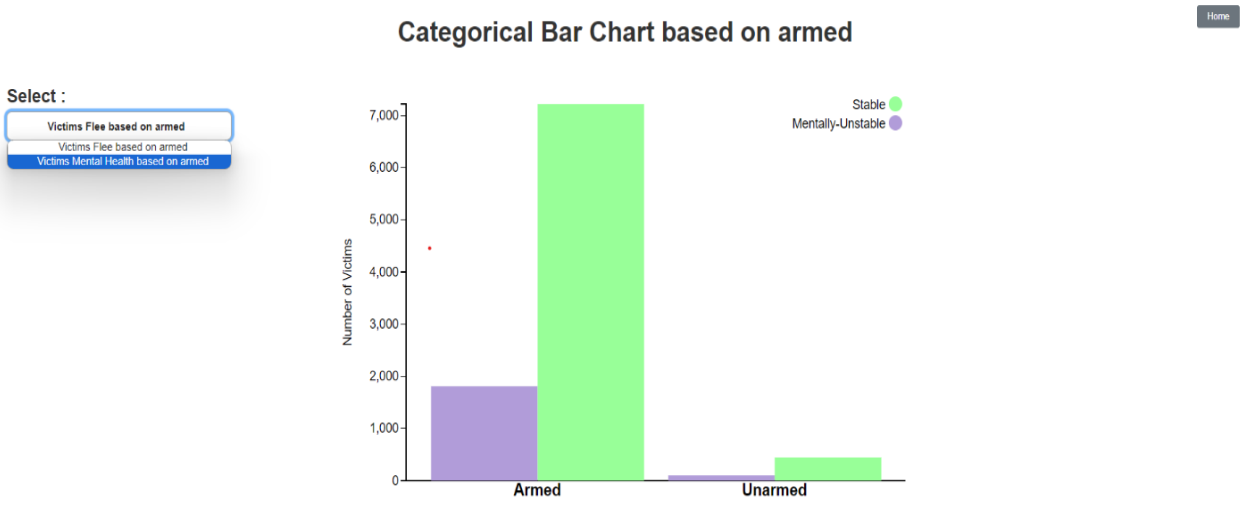
Web page when "Interactive Area Chart Visualization" is clicked



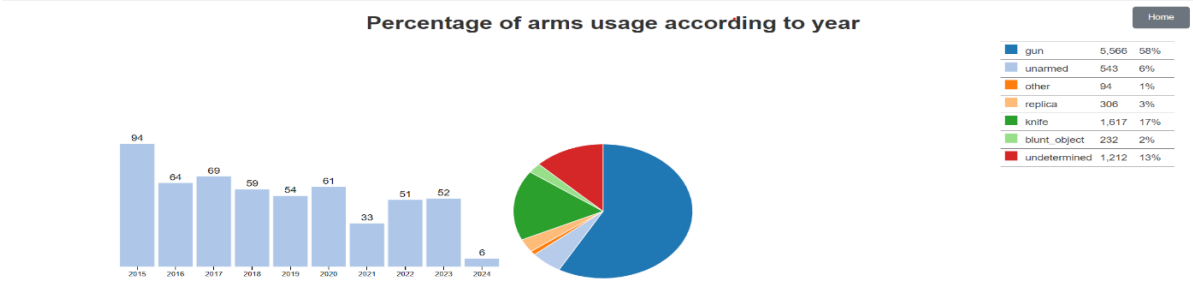
Web page when “Categorical Bar Chart based on gender” is clicked



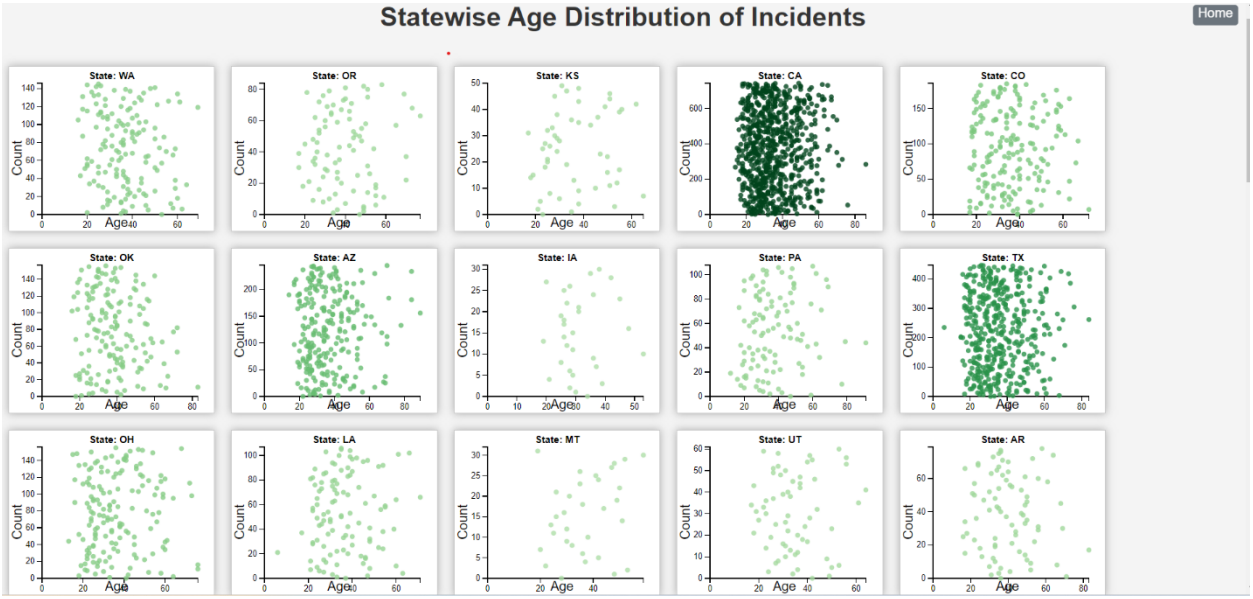
Web page when “Categorical Bar Chart based on armed” is clicked



Web page when “percentage of armed/unarmed” is clicked



Web page when “Statewise Age Distribution of Incidents” is clicked



Accountability Through Analysis

Our project provides a comprehensive analysis of fatal police shootings across the United States. Through dynamic and interactive visualizations, we've uncovered significant trends and demographic insights that contribute to a broader understanding of these incidents. Our findings support the need for informed policy changes aimed at enhancing accountability and trust between law enforcement and communities.