

A decorative graphic on the left side of the slide consisting of two overlapping parallelograms. The front one is blue and the back one is a light green. They are positioned diagonally, with the blue one partially covering the green one.

Seattle Traffic Collisions

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Introduction

- In regards to safety, automotive traffic offers a city an incredible challenge of understanding how and where to focus its efforts.
- Our project aims to offer a tool through which our own public entities and civil service entities can aim their efforts to create a safer and healthier environment for the citizens of Seattle.
- These organizations are not our only target user. Seattle's own common population can leverage our tool to be better informed and educated regarding areas of high risk regarding traffic collisions and injuries.



Objective

- Our project aims to create a visual representation of traffic collision data to better educate and inform both our own general public as well as members of our government of our current situation regarding motor vehicle safety.
- We achieve this through a visualization that not only identifies but highlights high risk areas through an easily interpretable visual guide of traffic collisions that have occurred in the city that is derived from real data collected over the past year.
- For agencies and public entities such as Seattle's own Department of Transportation or Sound Transit, this information is instrumental in guiding targeted improvements and implementing changes in areas prone to frequent collisions.
- Our efforts strive towards creating a map that could be used as a key tool utilized in future planning to make the streets safer for everyone, potentially stimulating additional research aimed at examining the attributes of regions with elevated accident and injury rates.



Data

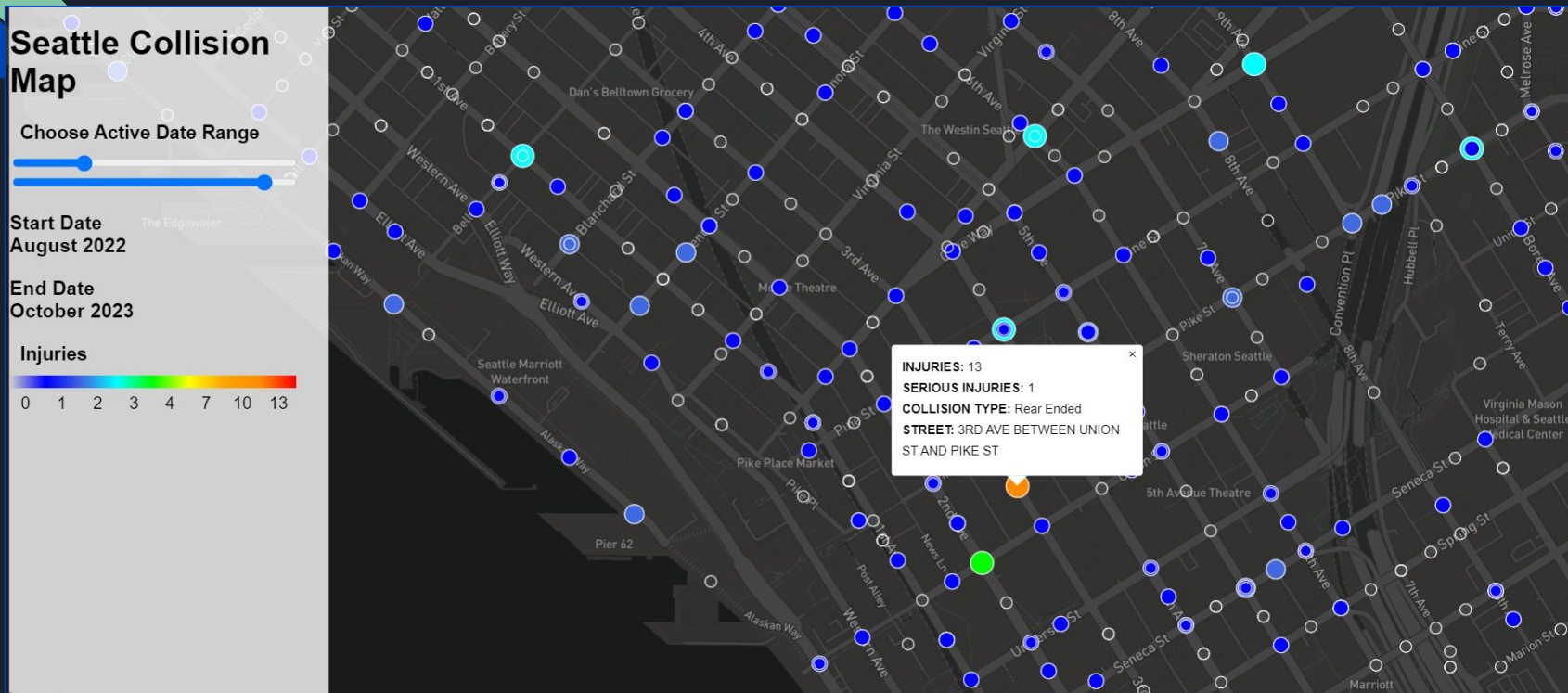
- For this project we required data that could be verified and trusted as well as being comprehensive enough in detail that we could draw conclusions from it.
- For this reason we sourced our data from Seattle Department of Transportation, Seattle's agency dedicated to planning designing and maintaining Seattle's transportation infrastructure.
- Originally the dataset contained a variety of collision information but for our purpose we focused on scale of collisions, injuries sustained and pedestrian involvement.
- To streamline and enhance our dataset we selected a subset covering the past year and trimmed the irrelevant data to optimize the size of our geoJSON file.



Implementation

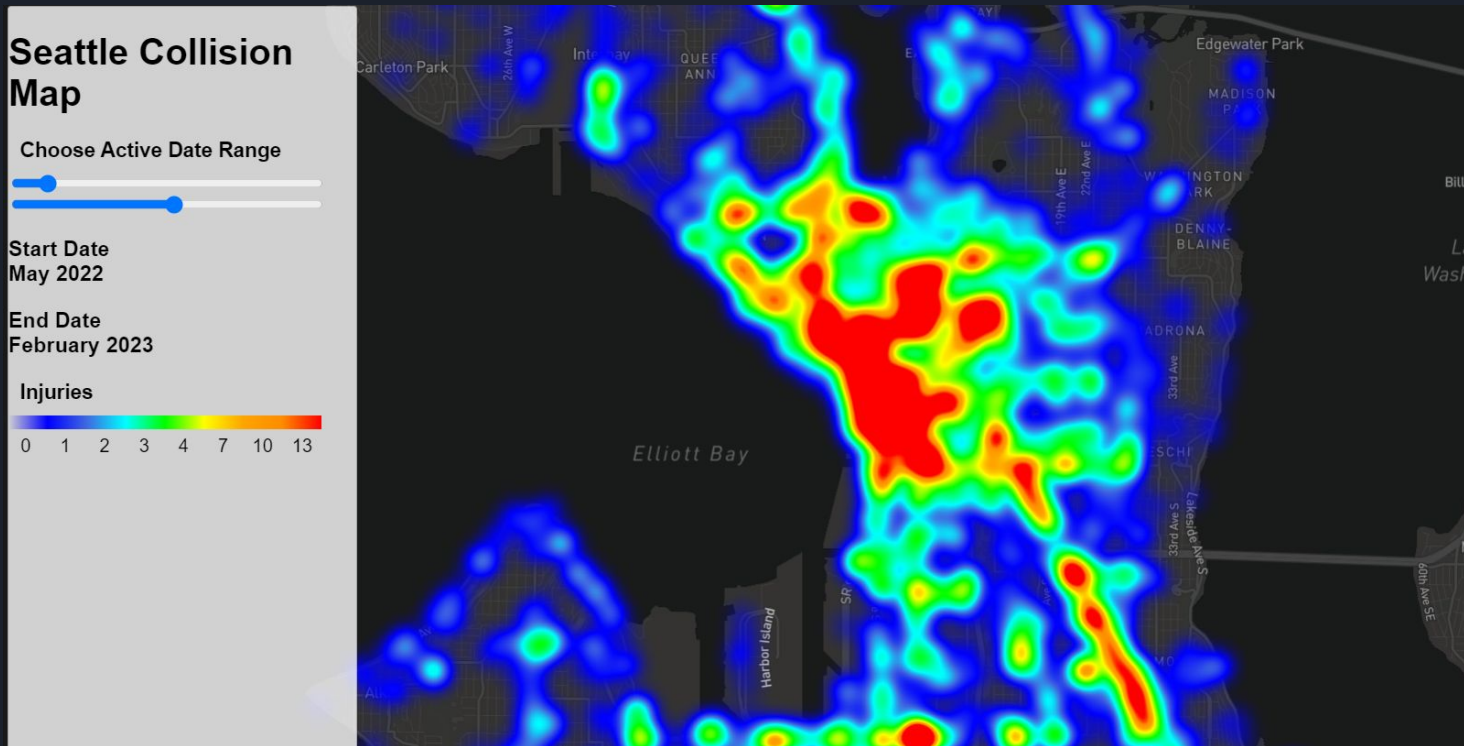
- For the visualization of our data we used the Mapbox GL JS library.
- Among many reasons we used Mapbox GL JS primarily because it empowered us to create an interactive visualization of our data thereby providing an engaging platform for users to explore and better understand the dynamics of traffic collisions in Seattle.
- By leveraging all of the features of Mapbox GL JS we were able to ensure a seamless and informative user experience affording a deeper understanding of our data to our user.

Our Visualization



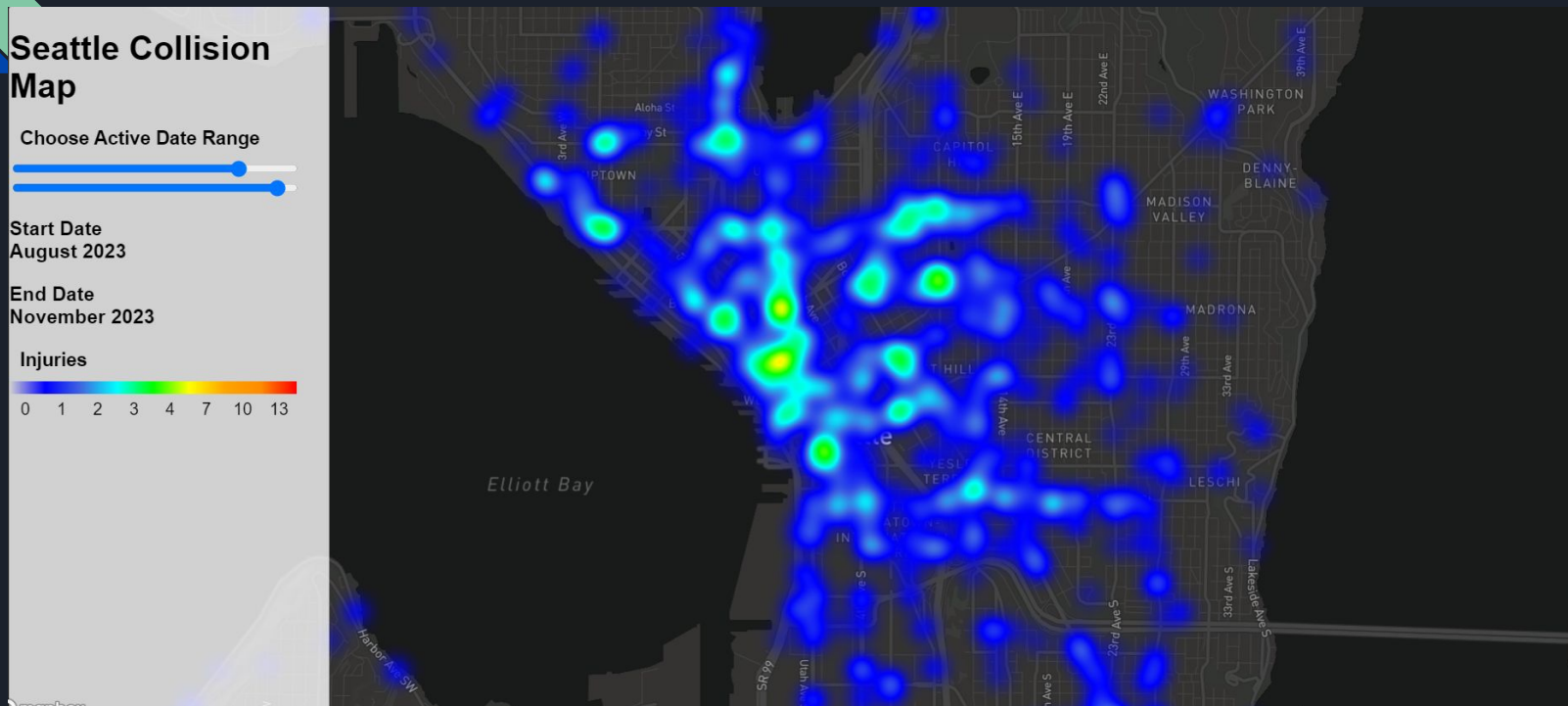
Here in our map we can see individual crash data points allowing closer investigation of our collision data.

Our Visualization



This is an example of the heatmap feature of our map which provides the user with a more general image of collisions to easily identify high-risk areas for traffic incidents in Seattle.

Our Visualization



This image was taken from a similar position on the map as the previous slide but clearly the data is different. This highlights our maps timeline feature allowing the user to select a date range for our collision data.



Importance and Impact

- The significance of our project lies in its purpose and potential to contribute to public safety and urban planning.
- By illuminating the spatial distribution of traffic collisions the map can serve as a tool for proactive decision making, enabling civic engagement by informing residents about safety concerns in their neighborhoods and empowers government officials to enact targeted interventions.
- Through this collaborative approach we strive to foster a safer and more informed community in Seattle.