February 2023 NYC Vehicle Collisions



Open Data for All New Yorkers

Open Data is free public data published by New York City agencies and other partners. Learn from past Open Data Week events, or sign up for the NYC Open Data mailing list to find training opportunities and upcoming events.

Search Open Data for things like 311, Buildings, Trees



Learn about the next decade of NYC Open Data and read our 2022 Report

How You Can Get Involved



New to Open Data Learn what data is and how to get started with our How



Data Veterans View details on Open Data APIs.



Get in Touch Ask a question, leave a comment, or suggest a dataset to the NYC Open Data team.



Dive into the Data If you already know what you're looking for, you can browse our data catalog.

Or, if you want to explore

Meet Our Team



Brittni Breese



Yash Kansal



Yeyan Wang



Nicole Campos

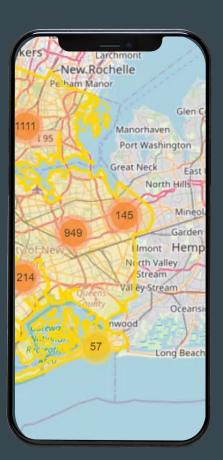


Adam Paganini

Who will this inform?

Individuals concerned about traffic safety:

- Police departments monitoring traffic safety
- Urban planning professionals
- Traffic management applications for building smart cities
- Mapping, navigation, and route planning businesses
- Location intelligence companies



Data Discovery

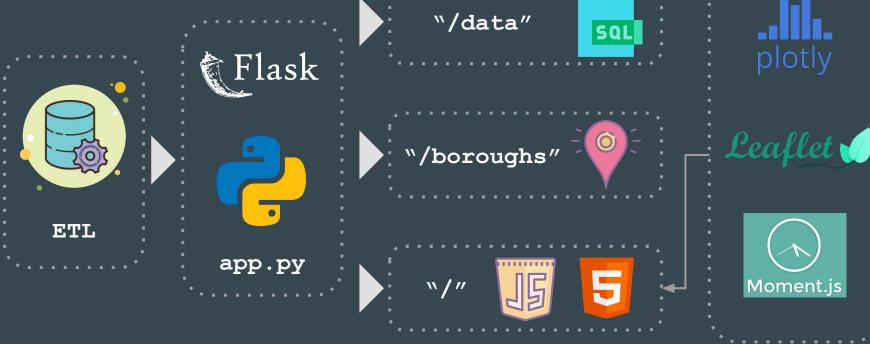
Data Set: NYC Motor Vehicle Collisions

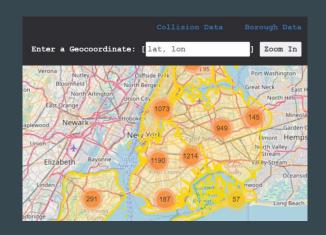
- ~1.98M rows of data, updated daily
 - Only used February 2023 (~6,800)
- Source: NY Police Department (NYPD)

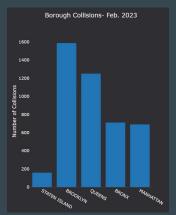


API Saved as Request SQLite DB Changed Datatypes **Dropped Null Rows** Crash Date to "datetime" Dropped which didn't have Crash Time to "Hour" Columns vehicle type defined requests Numbers to "int" (29 to 19) (~100 of 6800) engine (.json) Lat/Lon to "float" and to sql Pandas df Load Extract Transform

WebApp







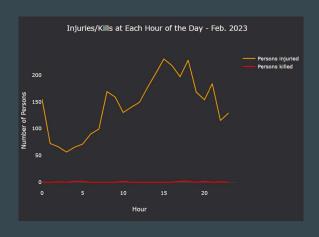


Chart Features

- Marker clusters identifying number of collisions in an area
- Marker pop up displaying more details of each collision
- Polygons displaying NYC Boroughs
- Lat/Lon zoom on specified location
- Scroll over bar/line charts to see data points

Styling

- Tab Buttons
- Tab Contents
- Plotly Chart Layout

DEMO

Key Challenges and Recommendations

- Only used one month of data due to difficulties loading the marker clusters
- Boroughs composed of multiple polygons (e.g., Staten Island)
- Random lat/longs off the coast of Ghana
- Zoom by address vs lat/long

- Efficiently store and display all the data available to enable longitudinal analysis
- Use lat/longs to label all collisions with appropriate Boroughs for popups
- Identify and remove outlier lat/longs from dataset
- Need to use another library that could parse addresses

Thank you!