CTE Portfolio

Artifact 1: NYC crash data project

Overview

This project analyzes motor vehicle crash data from New York City to help understand traffic safety patterns across the five boroughs. The website provides interactive visualizations and detailed crash information to help city planners, students, and citizens understand where crashes occur most frequently and why certain areas may be more dangerous than others.

The project serves as an educational tool that makes complex government data accessible to high school students and the general public. Users can explore crash statistics through charts, view real crash locations on an interactive map, and examine individual crash details through information cards. This helps with data understanding and awareness about safety issues in New York City.

Technology

The project uses HTML(HyperText Markup Language),CSS (Cascading Style Sheets) and JavaScript (JS). HTML provides the basic structure with three main pages (home, info, and analysis), CSS handles all styling with simple properties like colors, padding, and flexbox layouts, and JavaScript manages data processing and user interactions.
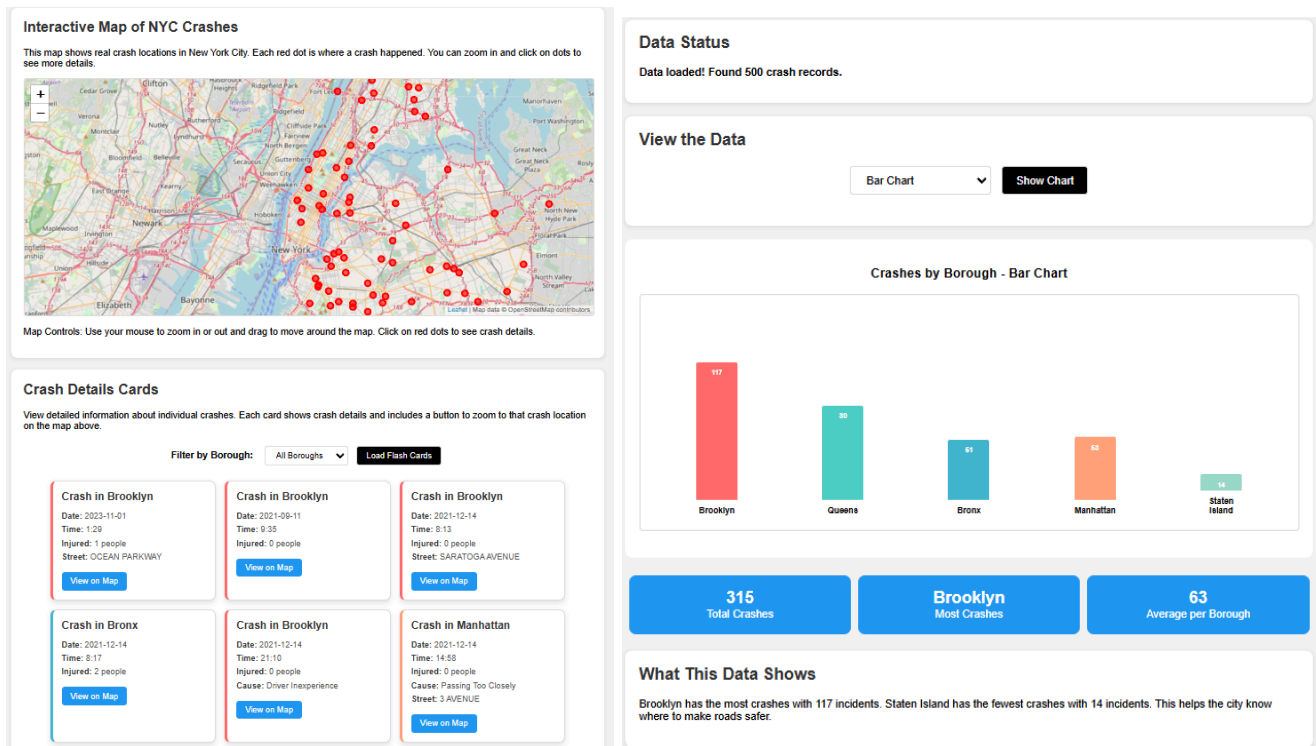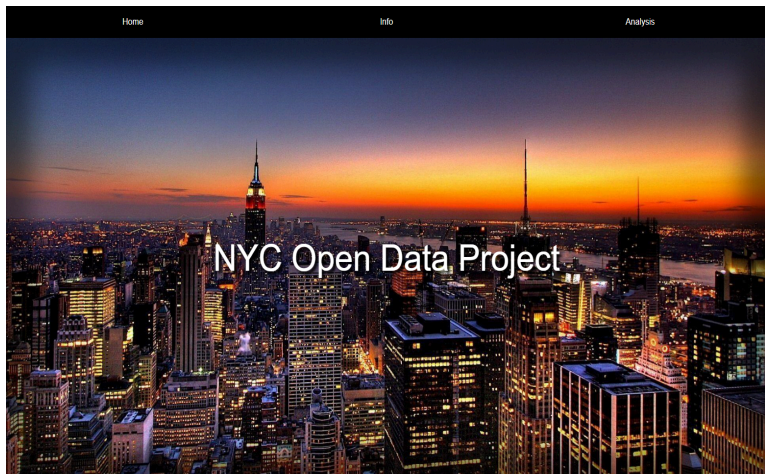
The project uses the NYC OpenData API to fetch real crash data, uses the Leaflet mapping library to display crash locations on an interactive map, and processes data to create charts and statistics for the user.

Resources

https://github.com/jackyc85/Project_JackyC_NYCDATA
https://jackyc85.github.io/Project_JackyC_NYCDATA/

Screenshots

Interactive Map of NYC Crashes

This map shows real crash locations in New York City. Each red dot is where a crash happened. You can zoom in and click on dots to see more details.

Map Controls: Use your mouse to zoom in or out and drag to move around the map. Click on red dots to see crash details.

Crash Details Cards

View detailed information about individual crashes. Each card shows crash details and includes a button to zoom to that crash location on the map above.

Filter by Borough: [All Boroughs] [Load Flash Cards]

Crash in Brooklyn
Date: 2023-11-01
Time: 1:29
Injured: 1 people
Street: OCEAN PARKWAY
[View on Map]

Crash in Brooklyn
Date: 2021-09-11
Time: 9:35
Injured: 0 people
[View on Map]

Crash in Brooklyn
Date: 2021-12-14
Time: 8:13
Injured: 0 people
Street: SARATOGA AVENUE
[View on Map]

Crash in Bronx
Date: 2021-12-14
Time: 8:17
Injured: 2 people
[View on Map]

Crash in Brooklyn
Date: 2021-12-14
Time: 21:10
Injured: 0 people
Cause: Driver Inexperience
[View on Map]

Crash in Manhattan
Date: 2021-12-14
Time: 14:58
Injured: 0 people
Cause: Passing Too Closely
Street: 3 AVENUE
[View on Map]

Data Status

Data loaded! Found 500 crash records.

View the Data

[Bar Chart] [Show Chart]

Crashes by Borough - Bar Chart

| 315 | Brooklyn | 63 |
| Total Crashes | Most Crashes | Average per Borough |

What This Data Shows

Brooklyn has the most crashes with 117 incidents. Staten Island has the fewest crashes with 14 incidents. This helps the city know where to make roads safer.

Step 1: Understanding the Data

The website shows data from New York City. Each crash report includes where the crash happened, when it happened, what caused the crash, and how many people were hurt.

Step 2: Reading the Charts

Bar Chart: Shows crash numbers as bars. Taller bars mean more crashes.

Pie Chart: Shows crashes as pieces of a pie. Bigger pieces mean more crashes.

Both charts show the same information in different ways for the user to understand.

Step 3: Using the Analysis Page

First, go to the Analysis page

Wait for the data to load from NYC

Choose "Bar Chart" or "Pie Chart"

Click "Show Chart" to see the data

Look at the statistics below the chart

What You Will Learn

Which borough has the most car crashes

Which borough has the fewest crashes

How crashes are spread across the city

Tips for Reading Data

Compare the numbers: Look at which borough has the highest and lowest numbers.

Think about why: Areas with more people usually have more crashes.

Look for patterns: Do certain boroughs always have similar crash numbers?

About This Project

This website shows data about car crashes in New York City. We look at which borough has the most crashes and this allows you to know where places need fixing. This data comes from the NYC government website.

The Five Boroughs of NYC

Brooklyn: Most populated borough

Queens: Largest borough by area

Manhattan: Most tourists and business

Bronx: North of Manhattan

Staten Island: Smallest population

Data Source

I used data from NYC Open Data. Original Data: NYC Open Data - Motor Vehicle Collisions

Navigate the Site

Info Page: Learn how to use the website and see interactive maps and flash cards

Analysis Page: See charts and statistics about crashes by borough