**Dataset:** Motor Vehicle Collisions – Crashes in New York

**Web Address:** <https://catalog.data.gov/dataset/motor-vehicle-collisions-crashes>

**Description of the Data Source:** This dataset details New York City car accidents. NYCDOT, NYPD, and others collect data. The dataset is updated regularly, ensuring its relevance for ongoing research. The data include detailed information about each collision, helping researchers understand a variety of factors that cause road accidents. This dataset is ideal for trend analysis, predictive modelling, and geographic study of city traffic safety. It Includes the following Key Variables:

1. **Location Information**: Latitude, longitude, borough, and street intersections are included in each entry. This allows detailed spatial analysis of NYC accident hotspots.
2. **Time and Date**: The dataset records every crash's exact time and date. This data lets researchers examine accident patterns by time of day, day of the week, or season to determine when they occur most often.
3. **Contributing Factors**: he data shows human and external factors that cause crashes. Distracted driving, speeding, alcohol use, and road and weather conditions are among these risks. Investigations into accident causes and prevention techniques require this substantial data collecting.
4. **Crash Severity**: It reports crash intensity, including injuries and deaths. This includes event-related pedestrian, motorist, and cycle counts. Researchers can examine contributing elements to determine significant accident likelihood using severity data.
5. **Vehicle Information**: The number and types of vehicles in each occurrence allow analysis of how truck, car, and bicycle types affect crash results.

**Why We Selected this Dataset:** We have selected this dataset as it meets the project requirements and it contains complete and current New York City vehicle accident reports, making it ideal for machine learning. This huge dataset has 1.4 million records with 29 independent factors like time, location, contributing causes, and accident severity. A predictive algorithm can predict accident severity based on weather, timing, and driving behaviour with this depth. Police can improve resource distribution, preventive measures, and road safety by predicting significant accidents with an accident severity prediction model. Traffic management and safety applications benefit from the dataset's speed, scale, and detail.