New York Vehicle Accidents Analysis

Overview

In a motor-vehicle crash, there's loss of life, property and resources. Each crash gets analyzed to identify the cause and the chain of events. This project will focus on analyzing a NY.gov data-set pertaining to motor-vehicle accidents that have happened in New York during the past few years, specifically 2014-2016. The data will be manipulated in multiple ways to identify trends with respect to factors like factor categorization of accident (Human, Environmental, Vehicle machinery, etc.), chain of events, state, vehicle type and model, etc. This analysis was produced through tools such as Python, Pandas, Excel, and API calling. The following data used for the analysis was retrieved through https://data.gov. Data was then cleansed and filtered for improper and incomplete reporting.

Analysis

This analysis will be working with the data-set of vehicle crashes in the time-frame of 2014-2016. The analysis is meant to isolate the crashes into 4 broad categories – General, Human, Vehicle and Environment. Each analysis was filtered to its respective category based on the data. Based on these 4 categories an analysis of the data will be conducted to understand following questions:

- General
    1. Spread of total accident for each year (2014-2016)
    2. Accident trend of NY and out of state drivers, using vehicle registration information.
- Human
    1. Spread of total accidents for each year (2014-2016, Human)
    2. Top 5 accident causes when human was the primary reason
    3. Spread of Top 5 accident causes per year (2014-2016)
    4. Comparison of the primary factor being human vs all other categories
- Vehicle
    1. Top 5 vehicle brands with the most accidents over 3 years
    2. Spread of the Top 5 vehicles per year (2014-2016)
    3. Comparison of primary factor being vehicle vs. all other categories
    4. Top 5 vehicle brands and their primary factor per year (2014-2016)
- Environment
    1. Top 10 environment factors
    2. Environment factors vs all other categories

This analysis was intended to help a consumer understand the insight and help in making an informed decision for their next vehicle purchase.