**Project Name: Toronto Traffic Data Analysis**

**Utsav Jitendrabhai Patel  
N01516259**

**Dataset Description:**It consists of several records, each representing a unique traffic accident incident. The dataset includes various attributes, such as accident location (latitude and longitude), date and time of occurrence, road class, accident classification (fatal, injury, property damage only), involved parties (drivers, pedestrians, cyclists), vehicle types, weather conditions, and more.

**Visualization:**

**Count of Accidents VS Year:**

**A graph with a line going up

Description automatically generated**

**Count of Accidents VS Road Class:**

**A graph of a bar

Description automatically generated**

**Vehicle Type Vs Count of Accidents**

**A pie chart with different colored circles

Description automatically generated**

**Number of Accidents in Particular Time Slot**

A colorful circles with numbers

Description automatically generated

**Accidents VS VehType and Visibility  
  
A graph with multiple colored lines

Description automatically generated**

**Insights:**

1: The line chart will display the trend of the count of accidents over the years.   
This visualization is particularly useful for identifying trends in accident occurrences.  
  
The highest Accident I found by visualization was in 2006 and the number is 2006.  
The Lowest Accident in 2020 and the number is 633.

2: The bar graph showcases the number of traffic accidents recorded for each road class over the analyzed period. The x-axis represents the road classes, while the y-axis displays the count of accidents. Each bar in the graph represents a road class category, and its height corresponds to the number of accidents attributed to that particular road class.  
  
The highest Accident I found in major arterial the number is in 2006.  
The Lowest Accident in Major Arterial.

3: In this visualization, we present the distribution of traffic accidents across various vehicle types. Each slice of the pie represents a specific vehicle category, and its size corresponds to the proportion of accidents involving that vehicle. The chart showcases a holistic view of how different vehicle types contribute to the total accident count.  
  
Automobile, Station Wagon is causing major accidents 6890.

4: The bubbles are color-coded to distinguish between different time slots, making identifying peak periods of accidents during the day effortless. Additionally, hovering over each bubble provides precise information about the start and end times of the time slot and the exact count of accidents for that particular period.  
The highest number of Accidents in the 16.00-19.59 time slot and the number of accidents is 4158.  
The lowest number of Accidents is in the 4.00-7.59 time slot and the number of accidents is 1513.

5: The bars are color-coded to differentiate between vehicle types, allowing for easy identification of the most accident-prone categories. Additionally, each set of bars is labeled with the visibility condition, making it straightforward to identify trends and patterns related to visibility impact on accident frequencies.

**Dashboard:**

A screenshot of a graph

Description automatically generated