TORONTO TRAFFIC ANALYSIS SUMMARY

Initial Questions

The objective was to analyze vehicle collision data from the City of Toronto's KSI (Killed or Seriously Injured) database to understand the types of collisions that occur and who is involved in those collisions. Some of the initial questions were:

- When do collisions occur?
- Who is involved in collisions?
- How old are the people involved in collisions?
- What type of vehicles are involved in collisions?

Comparison Analysis

Rather than simply analyzing the Toronto collision data in isolation, comparisons were made to Ottawa collision data and Canadian national collision data.

The comparison analysis allowed for potential identification of collision characteristics that are unique to Toronto traffic.

Supplemental Analysis

In addition to analyzing the occurrence of collisions in Toronto, analysis was done on the impact of Red-Light Cameras on collision frequency as well as the availability of public transit in relation to collision locations.

Time Period

The Toronto collisions data covers the period from 2006 to 2020.

2020 Data

2020 included the start of the COVID pandemic which included a lockdown period. During this lockdown period there were fewer people travelling and as a result there was a drop in the number of collisions that occurred. The 2020 data was included in the analysis while noting the impact of the COVID pandemic to the data.

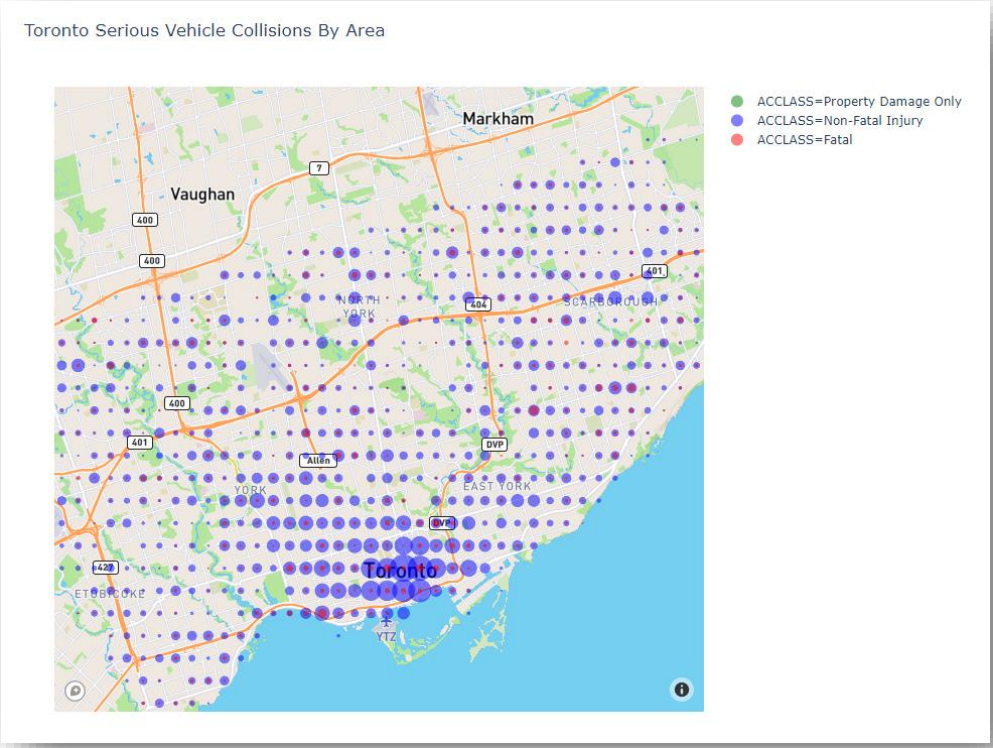
The Ottawa data covers the period of 2013 to 2019 and the national data covers the period from 1999 to 2017. For comparison purposes, the national data prior to 2006 was excluded from the analysis.

Conclusions

1. Toronto has an unusually high frequency of collisions involving pedestrians. The frequency of pedestrian collisions is higher than Ottawa and higher than national data.

> ***"Toronto has an unusually high frequency of collisions involving pedestrians."***

2. Collisions involving a fatality very often involve a pedestrian fatality.
3. A high number of collisions occur in the downtown Toronto core.



4. Red light cameras do not significantly impact the number of collisions that occur in an area.
5. The likelihood of a Toronto collision causing a fatality could be predicted with over 80% accuracy using the Random Forest Classifier.