INTRODUCTION / BUSINESS PROBLEM

The goal of this analysis is to assess, if there is a relationship between the number of late-night accidents and night life activities in the Toronto area. Usually, the bulk of the traffic is in the day when people are travelling to and from their work or they are going out to buy groceries, shopping etc. In general, the traffic is less in the night and less traffic should mean less traffic accidents.

In this assignment I will analyze, if the number of night life spots in the Toronto area increases the number of accidents in the area at the nighttime or not. The accident data will be divided into daytime accidents and nighttime accidents, and I will focus on the nighttime accidents. The analysis will focus only on the business related to night life activities, like bars, pubs, night clubs etc.

I will use Foursquare API to identify the number of nightlife spots in the Toronto area. The data for nightlife spots will be collected at the postal codes level. The accidents data will also be rolled up at the postal codes level.

The nighttime activities are usually less during the weeknights, but they are comparatively more on the weekends. The analysis will compare the number of nighttime accidents during weeknights and weekend nights. A higher number of accidents at weekend nights in the areas with higher number of nightlife spots will indicate, nightlife spots may be a contributing factor of higher accidents in the area.

The nightlife business like bars, night clubs, pubs, karaoke bars, etc. can use the analysis done in this project to take additional steps to ensure the safe returns of their customers. The accidents rate seems to be higher during weekend. Business especially over the weekend can offer deals which include vouchers for ride sharing services. The businesses can work with the ride sharing or cab services to ensure easy availability of these services. The area police can use the results to identify in which areas and what days of week the police need to increase the patrol. The health and safety departments of the highly affected neighborhoods can run public awareness campaigns.