Capstone Project Report – The Battle of Neighborhoods

1. Introduction & Business Problem

In this project we will try to find an optimal location for a restaurant. Specifically, this report will be targeted to stakeholders interested in opening an Asian restaurant in Toronto, Canada.

Since there are lots of restaurants in Toronto, we will try to detect locations that are not already crowded with restaurants. We are also particularly interested in areas with no Asian restaurants in vicinity. We would also prefer locations where restaurants have lowest average rating, assuming that first two conditions are met.

We will also cluster the neighborhoods based on the venues to better understand the characteristics and business environment of each neighborhood.

We will use our data science powers to generate a few most promising neighborhoods based on these criteria. Advantages of each area will then be clearly expressed so that best possible final location can be chosen by stakeholders.

2. Data

Based on definition of our problem, factors that will influence our decission are:

- number of existing restaurants in the neighborhood (any type of restaurant)
- number of and distance to Italian restaurants in the neighborhood, if any
- Average rating of restaurants
- The venue cluster of the neighborhood and the main characteristic of each neighborhood

Following data sources will be needed to extract/generate the required information:

- number of restaurants and their type and location in every neighborhood will be obtained using **Foursquare API**