Capstone Project: Battle of the Neighborhoods

Part 1: Introduction / Business Problem

1.1 Discussion of the problem and the background

"Which Toronto neighborhood is the most ideal to start an Indian restaurant?"

My Canadian client, Mr Singh, owns a chain of Indian restaurants in various popular cities in Canada – including Montreal, Vancouver and Quebec. He now wishes to start an Indian restaurant in Toronto.

Mr Singh wants me to consult him on which locality or neighborhood of Toronto is best suited to start his Indian restaurant. He has put forth the following criterion which needs to be satisfied in my work:

- The locality or the neighborhood ideally should be situated in Downtown Toronto. The second preference would be West Toronto.
- The neighborhood should not have any restaurant among its top 2 commonly visited places

The task here is to recommend the best possible location in Toronto which satisfies both the criteria above and allows Mr Singh to start a successful Indian restaurant.

1.2 Target Audience

Toronto is one of the most ethnically diverse cities in Canada, with over 51% of the population belonging to a specific minority group. Per the survey conducted in 2016, approximately 12.6% of the population is South-Asian. Opening an Indian restaurant in Toronto could prove to be a profitable proposition, given its popularity as a cuisine not only among the south Asians but all over the world.

Part 2: Data

2.1 Description of the data

This project will rely mainly on the publicly available data from Wikipedia as well as Foursquare.

2.1.1 Dataset 1: List of postal codes of Toronto along with the boroughs and neighborhoods

Since we focus on Toronto in this project, we will be looking to procure all the demographic information related to city, including all the boroughs and neighborhoods of Toronto along with their associated zip code.

To do this, we rely on the publicly available Wikipedia page for the same, titled List of postal codes of Canada: M (Link can found [here](#)). As can be seen from the description of the page:

"Postal codes beginning with M are located within the city of Toronto in the province of Ontario."

We will be scraping this data from the Wikipedia page with the help of Python's pandas and Wikipedia packages.

2.1.2 Dataset 2: Geographical co-ordinates of the neighborhoods

In order to plot the neighborhoods on the map, we will also be using the geographical co-ordinates of the neighborhoods of Toronto. Although this data can be obtained using the Google Maps Geocoding API, given the unreliability of the package we use data from the following source: http://cocl.us/Geospatial_data

2.1.3 Dataset 3: Data called from through Foursquare API

In this project, we will be leveraging the Foursquare API to obtain the geographical location data of various neighborhoods of Toronto. This data will be used to explore the popular and commonly visited venues in each of the neighborhoods, which will help us to identify the best possible location for our client's Indian restaurant.

We will be identifying top 10 popular venues in each of the areas to satisfy the client's requirement that our locality should not have a restaurant in the top 2 commonly

visited venues. Due to the API restrictions set by Foursquare, our search for the number of venues would be limited only to 100.