Capstone Project

Chinese Cuisine in Toronto

Problem Statement

- The city of Toronto is a very big city with a large variety of cuisines. Many visitors from Asia like to go to Toronto, but they may have problems finding food that they like. For this project, we will make use of data from FourSquare, and identify neighbourhoods that have great Chinese Cuisines. We will recommend the Chinese Restaurants based on their "Likes", "Ratings" and "Tips.

Data

- Our primary sources of data on Toronto will be from the following:

- 1. Wikipedia: "https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M"
- 2. Coordinates of Postal Codes: "http://cocl.us/Geospatial_data"

Approach and Analysis

- 1. Collect the Toronto City Data from Wikipedia
- 2. Using FourSquare API to find all venues for each neighborhood.
- 3. Filter out the Chinese Restaurants
- 4. Find rating , tips and like count using FourSquare API.
- 5. Sort the restuarants based on "Likes", "Rating", "Tips"
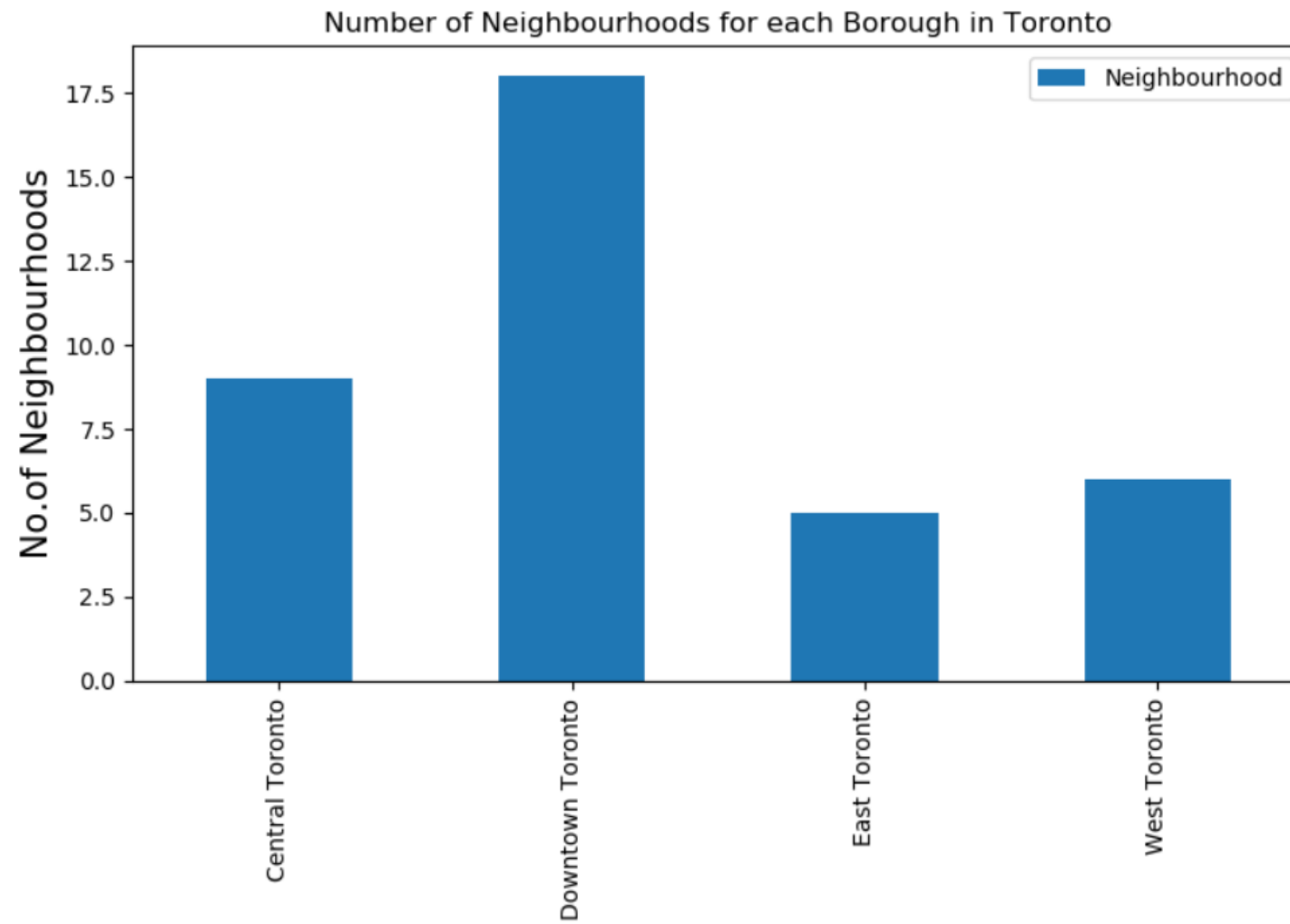- 6. Visualize data using folium library(python)

Importing and Cleaning Data

- Web scape data from
  https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M
- Clean the data
  - Remove rows where Borough is "Non assigned"
  - If "Neighborhood" has missing data, put equal to "Borough"
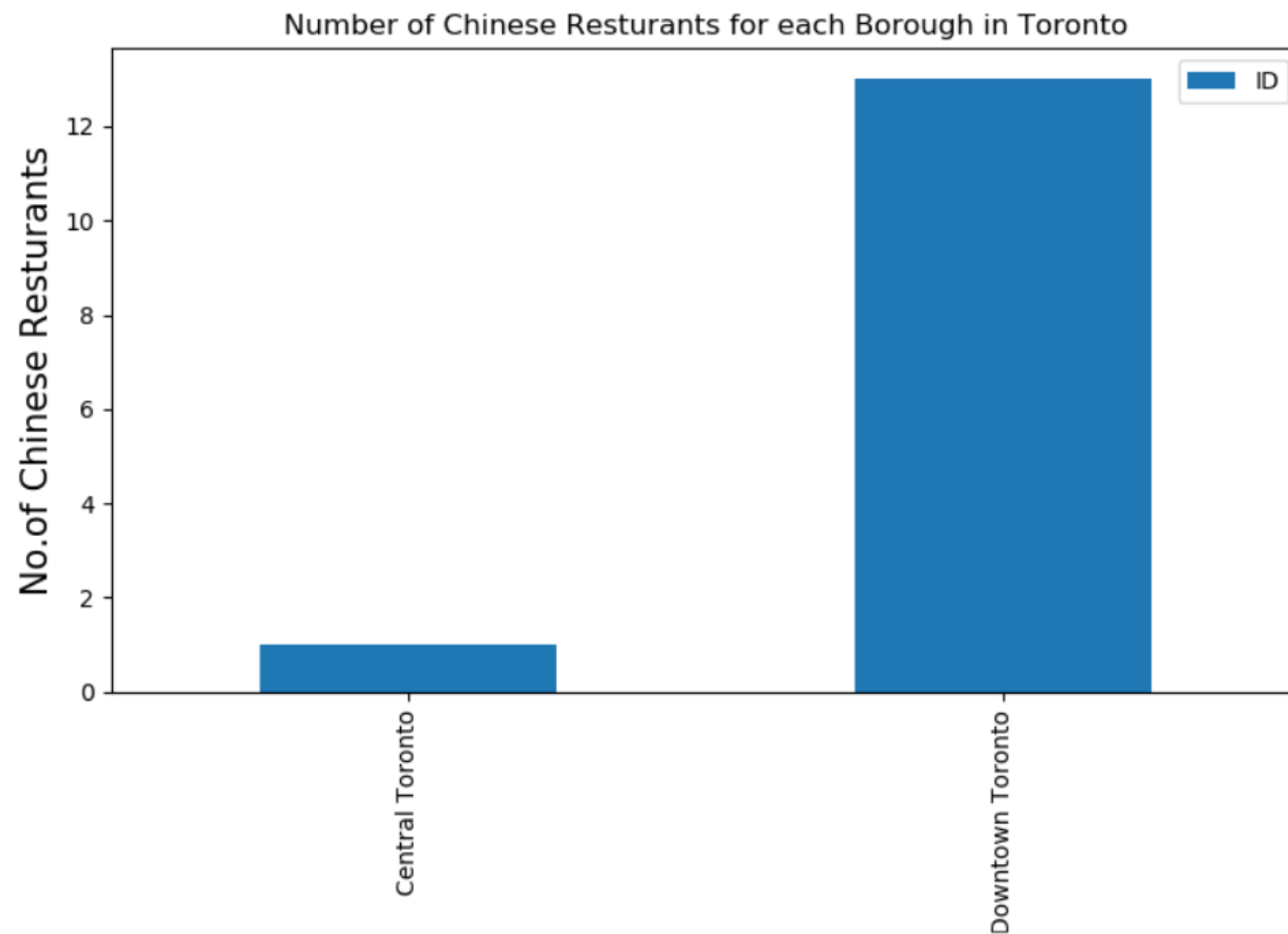- Retrieve coordinates info from http://cocl.us/Geospatial_data

Define Functions

- geo_location(address)
  - To get the latitude and longitude information using geopy

- get_venues(lat, lng)
  - To get venue details ('ID', 'name', 'category') based on geocodes from FourSquare

- get_venue_details(venue_id)
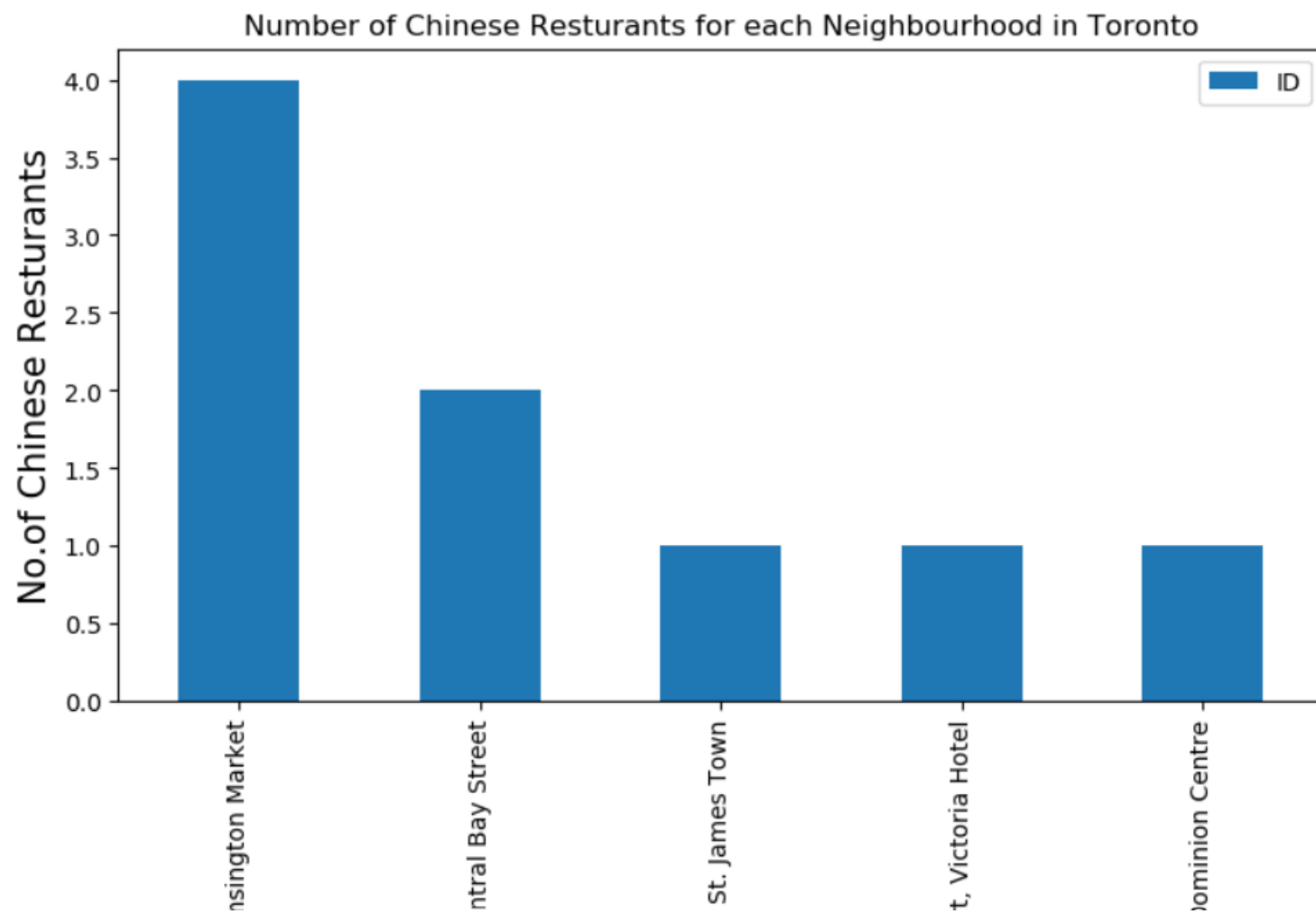 - To get details venue information ('Likes', 'Tips', 'Rating') using venue_id from FourSquare

Results

Results (cont'd)

Number of Chinese Resturants for each Borough in Toronto

Results (cont'd)

Number of Chinese Resturants for each Neighbourhood in Toronto

Analysis – Details of each restaurant

In [39]: `ch_rest_stats_df`

Out[39]:

|	Borough	Neighbourhood	ID	Name	Likes	Rating	Tips
0	Central Toronto	North Toronto West	4aec79e5f964a5209fc721e3	C'est Bon	7.0	7.3	6.0
1	Downtown Toronto	Cabbagetown, St. James Town	4bca992068f976b017d35f83	China Gourmet	4.0	5.9	6.0
2	Downtown Toronto	Ryerson, Garden District	58e91d60e0adac258fcea481	GB Hand-Pulled Noodles	34.0	7.8	9.0
3	Downtown Toronto	Central Bay Street	58e91d60e0adac258fcea481	GB Hand-Pulled Noodles	34.0	7.8	9.0
4	Downtown Toronto	Central Bay Street	52a7ae41498eed3af4d0a3fa	Yueh Tung Chinese Restaurant	33.0	7.8	10.0
5	Downtown Toronto	Harbourfront East, Toronto Islands, Union Station	4ae33054f964a520759121e3	Pearl Harbourfront	116.0	8.1	34.0
6	Downtown Toronto	Design Exchange, Toronto Dominion Centre	4d7a6212e8b7a1cdb919971f	Szechuan Express	12.0	7.2	5.0
7	Downtown Toronto	Commerce Court, Victoria Hotel	4d7a6212e8b7a1cdb919971f	Szechuan Express	12.0	7.2	5.0
8	Downtown Toronto	Harbord, University of Toronto	4b340703f964a5200d2425e3	River Tai Restaurant	5.0	6.7	5.0
9	Downtown Toronto	Chinatown, Grange Park, Kensington Market	4ae29812f964a520288f21e3	Swatow Restaurant 汕頭小食家	86.0	7.7	53.0
10	Downtown Toronto	Chinatown, Grange Park, Kensington Market	4fd3ea3ee4b0191b9c2b1aff	Rosewood Chinese Cuisine	53.0	7.7	26.0
11	Downtown Toronto	Chinatown, Grange Park, Kensington Market	4b074bb1f964a52077fb22e3	New Sky Restaurant 小沙田食家	34.0	7.4	14.0
12	Downtown Toronto	Chinatown, Grange Park, Kensington Market	4adb5472f964a520fc2521e3	Asian Legend 味香村	105.0	7.7	44.0
13	Downtown Toronto	Stn A PO Boxes 25 The Esplanade	4d7a6212e8b7a1cdb919971f	Szechuan Express	12.0	7.2	5.0

Analysis – Most Likes
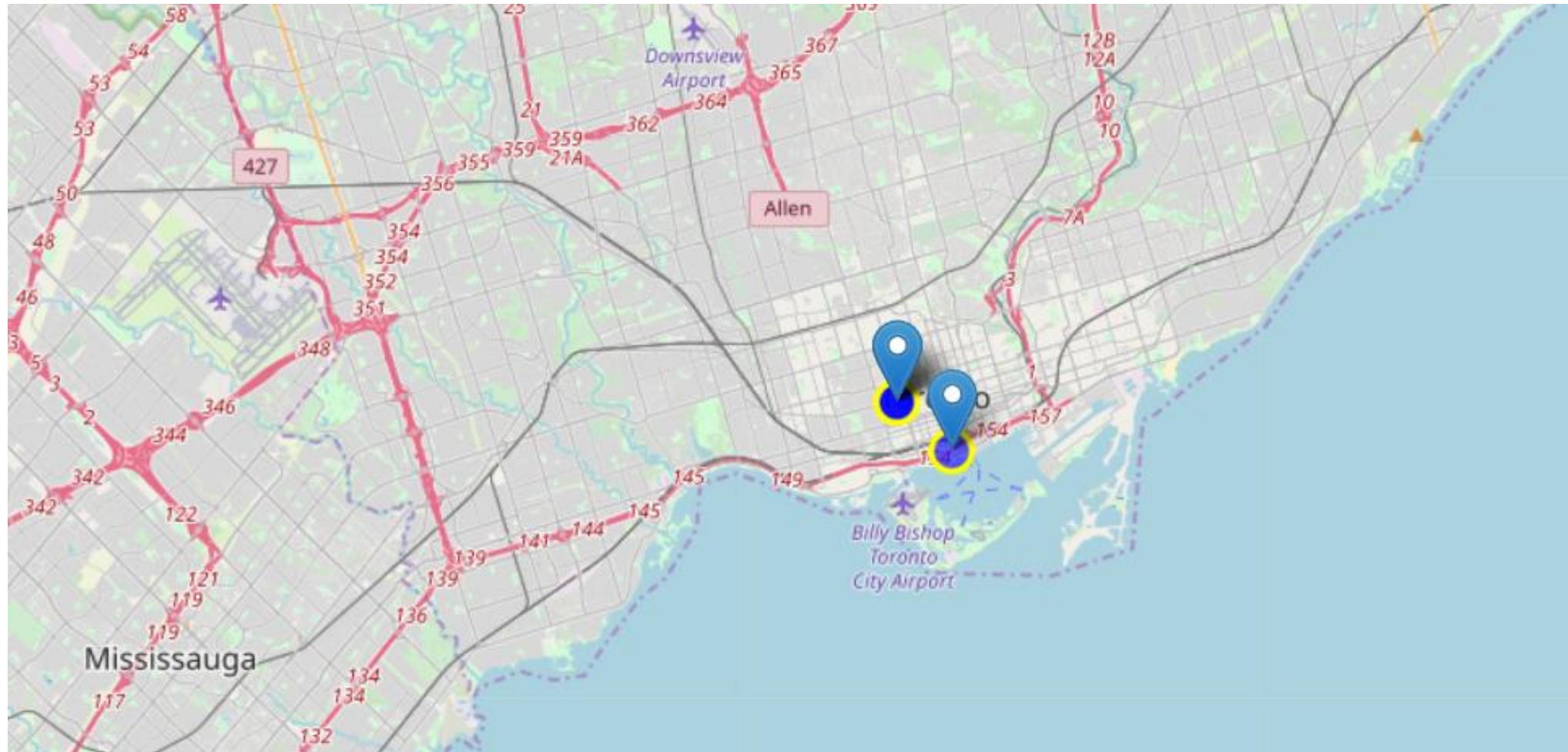
Analysis – Most Tips
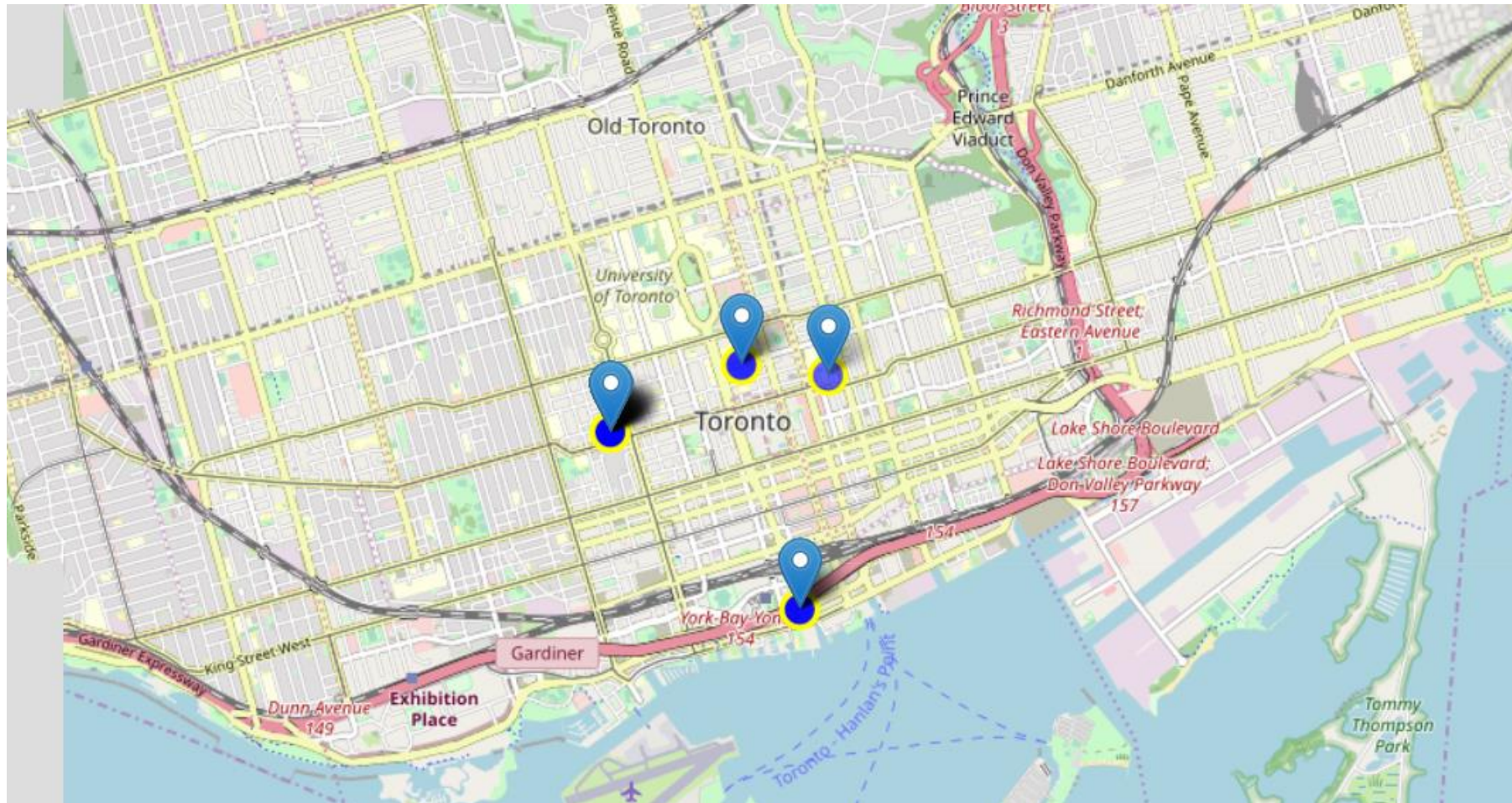
Analysis – Best Rating
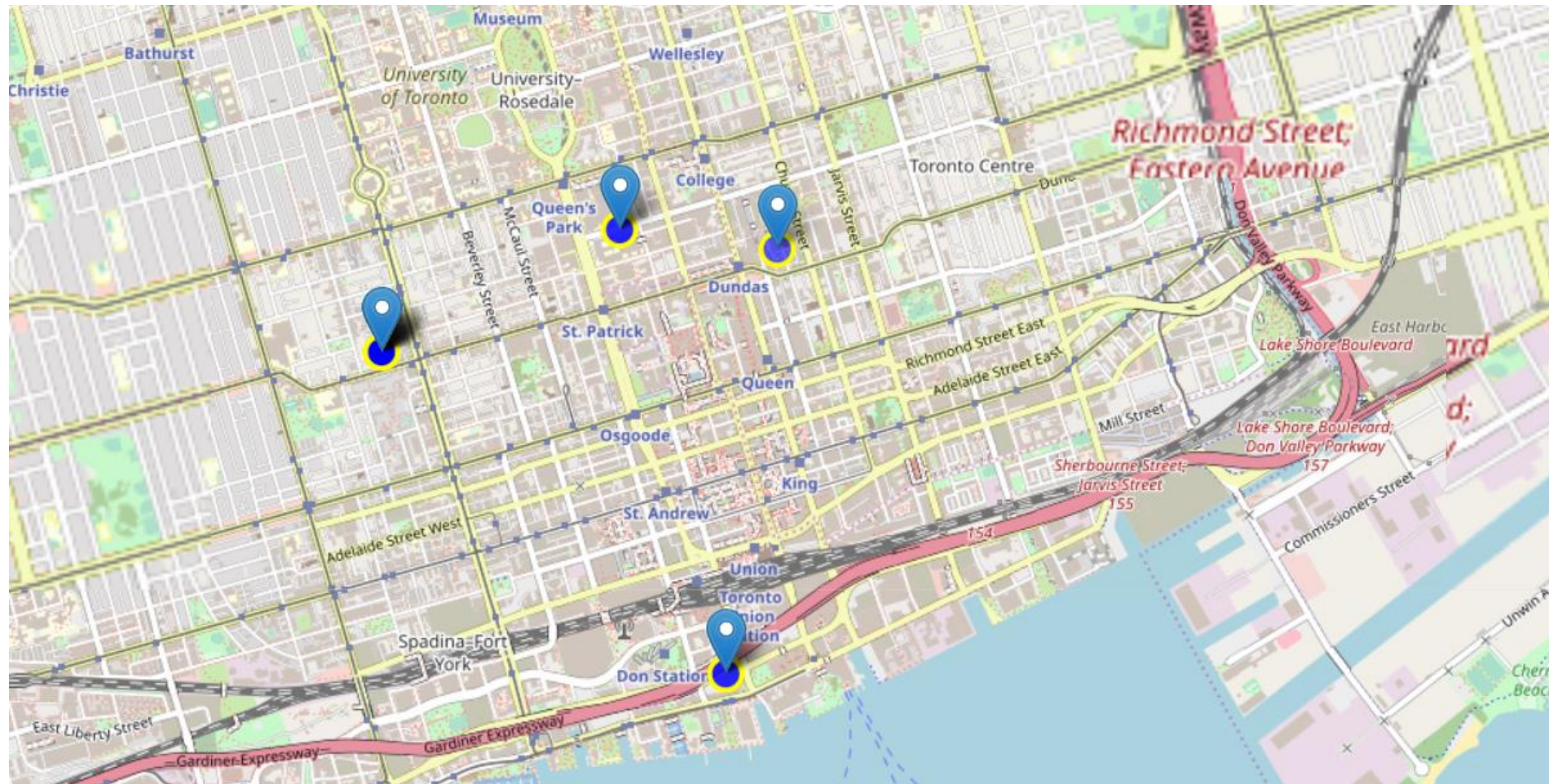
Conclusions

- Most of the Chinese Restaurants are located in Downtown Toronto

- Specifically, Chinatown has the most numbers of Chinese Restaurants

- Based on the data provided from Foursquares, we are able to pinpoint the exact locations of the restaurants that have the most "Likes", "Tips" or with the highest "Ratings"

- We are then able to plot on a map, and for easy reference for any visitors to the city.

- This project can be easily extended to other cities, or to identify other cuisines or landmarks.