

# **Battle of Neighborhoods**

Coursera Capstone Project

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## **Business Problem / Introduction**

Toronto is crowded, multicultural and touristic city. According to 2017 data provided by United Nations population of Toronto is approximately 2.93 million which is high enough. That's why opening restaurant in Toronto can be very profitable for restaurant owner. We are trying to help to people who want to open Chinese restaurant in this big city. These people should ask for help to data science team for analyzing different areas of Toronto to show best available places which can bring more profit to restaurant owner than other places. Of course, opening Chinese restaurant without analyzing area might be less profitable.

## **Data**

1. Data Source: <https://www.toronto.ca>

Description: Official website of Toronto City that contains a lot of data related to Toronto. We will use these datasets to get neighborhood names, individual income for 2015, and population for 2016 for each of neighborhoods.

2. Data Source: Geopy

Description: With using 'Nominatim' function of 'Geopy.Geocoders' module we got locations of each neighborhoods and merged this data with previous dataframe.

3. Data Source: Foursquare API

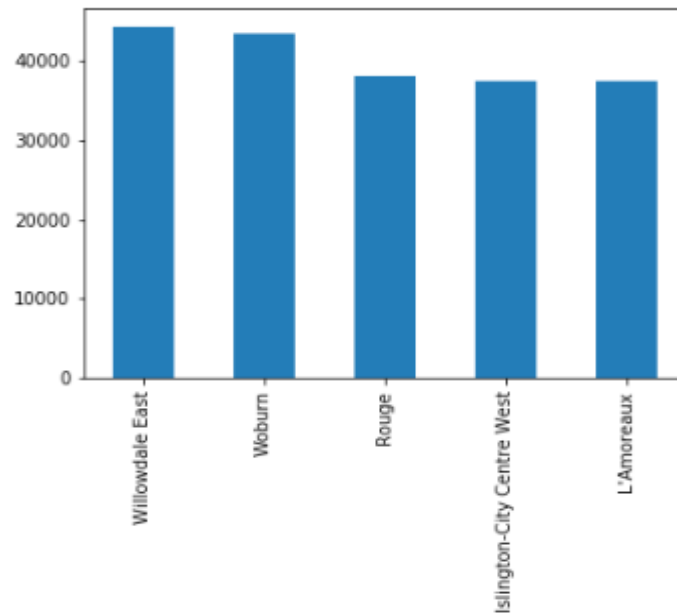
Description: We used Foursquare API to get locations of all Chinese Restaurants in Toronto.

## **Methodology**

We downloaded dataset from official web site of Toronto city and filtered needed parts for creating our dataframe. Locations that we get thanks to Geopy and Foursquare were added to map to see density Chinese restaurants for neighborhoods of Toronto.

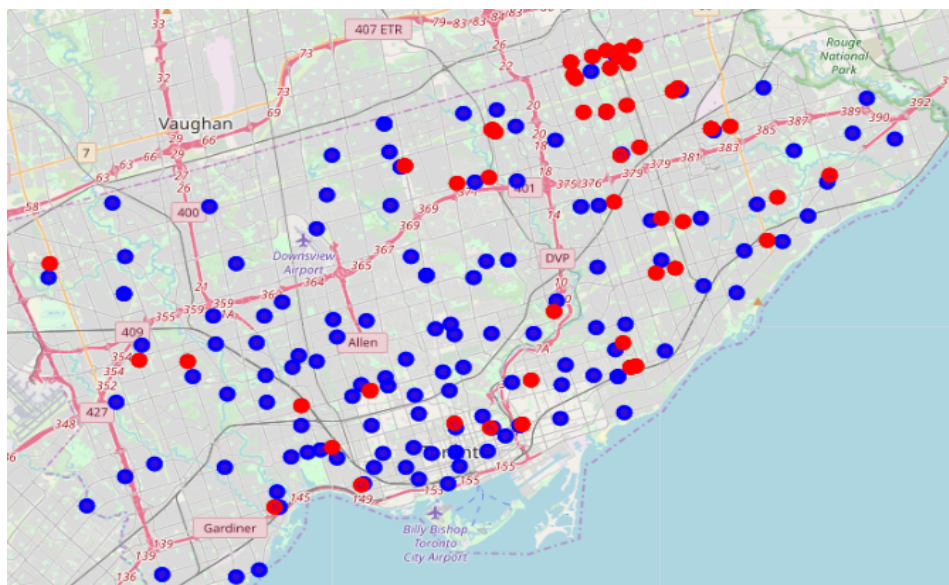
## Results

After analysis we got top 5 neighborhoods with highest income and population. Those Neighborhoods are:



After seeing map that shows location of Chinese restaurants in Toronto, we saw there are already enough Chinese restaurants in Willowdale East and Woburn neighborhoods. It means if owner would choose these areas for new opening restaurant, he or she will have rivals which can make this business less profitable for owner. But when we look at Rouge and Islington – City Centre West neighborhoods in the map, we find out that there are no Chinese restaurants at all in these areas.

Map is shown below:



Note! Blue points are neighborhoods and red points are Chinese restaurants in the city.

## **Recommendations**

We recommend to owner to choose areas with high income and population points and without rival Chinese restaurants. Rouge and Islington – City Centre West neighborhoods can be best choices among all neighborhoods to open new Chinese restaurant.

## **Conclusion**

In this study, we tried to find best available place for new opening Chinese restaurant in Toronto city. We created dataframe with data we have got from different resources and we used bar chart and map to visualize our data. This report will help to any future restaurant who wants to open Chinese restaurant in Toronto city.