Capstone Project - The Battle of Neighborhoods

Applied Data Science Capstone

Introduction

Toronto, a provincial capital of Ontario, is the most populous city in Canada. Also it is a large international business centre and is recognized as one of the most multicultural cities in the world.

By the way, 47% of population of Toronto are immigrants from China, India, etc. So, let's imagine that each cultural group needs some places where they can meet or have a lunch, and there should be national cuisine restaurants.

Now, we will see in which neighborhoods Chinese people can take a break from their daily routine and eat some Chinese food. Following analysis might be useful for small businesses that are finding places to open Chinese restaurants in Toronto, tourists and immigrants can examine which areas are popular among Chinese diaspora.

Data Section

Toronto is a good example of city with well-developed infrastructure, even though it is a very ethnically-diversed city. For this reason, we will use the data about neighborhoods boundaries, their latitude and longitude, and venues information.

- Foursquare API that allows us to retrieve information about Chinese restaurants that are close to some places or coordinates.
- Toronto neighborhoods boundaries, that shows administrative boundaries of them. https://open.toronto.ca/dataset/neighbourhoods/
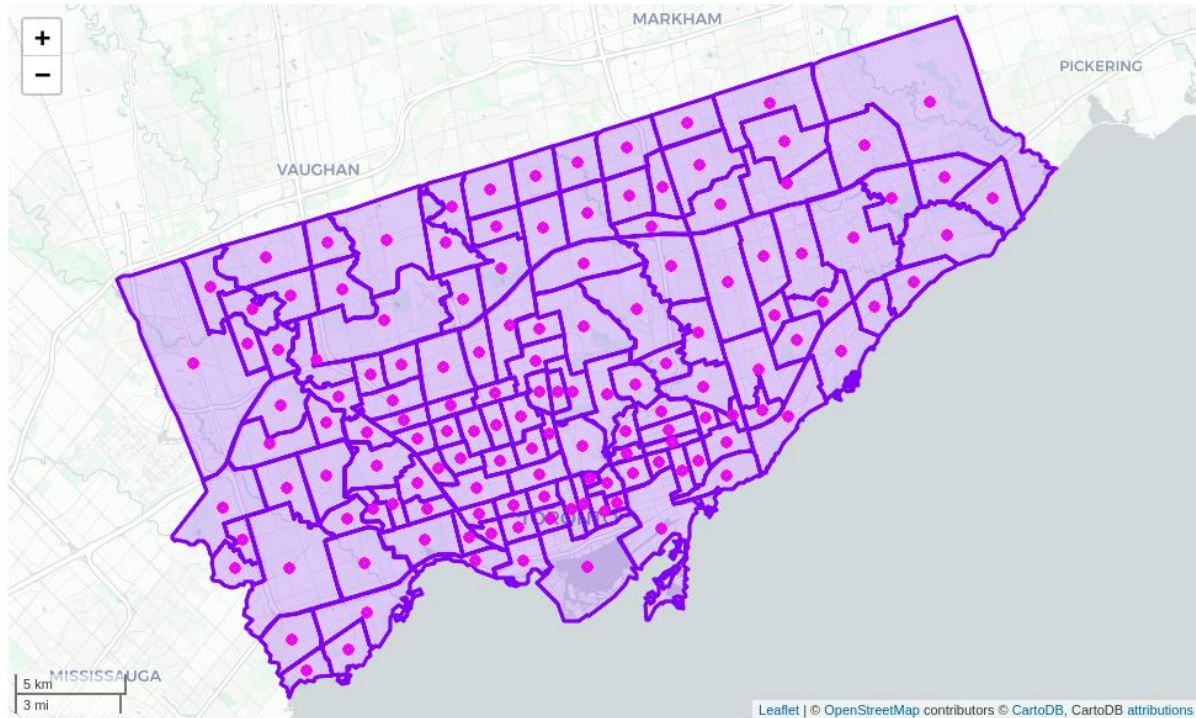
Questions

1. Which neighborhoods in Toronto have a large number of Chinese restaurants?
2. Which areas lack Chinese restaurants?
3. Which neighborhoods can be good places to open a new Chinese restaurant?
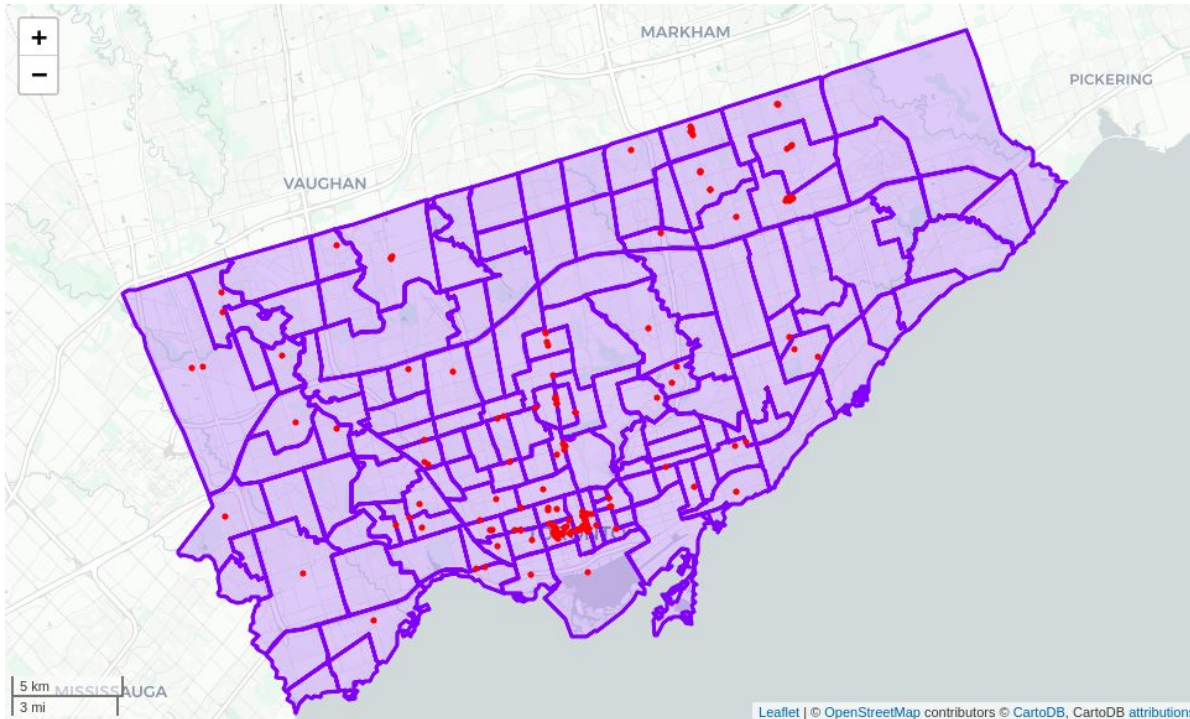4. Which places should you visit if you are fond of Chinese cuisine?

Methodology

● Extract information from Toronto GeoJson
● Create a dataframe with Neighborhoods coordinates and send responses to Foursquare API and load results to another dataframe
● Select top Neighborhoods by number of Chinese Restaurants
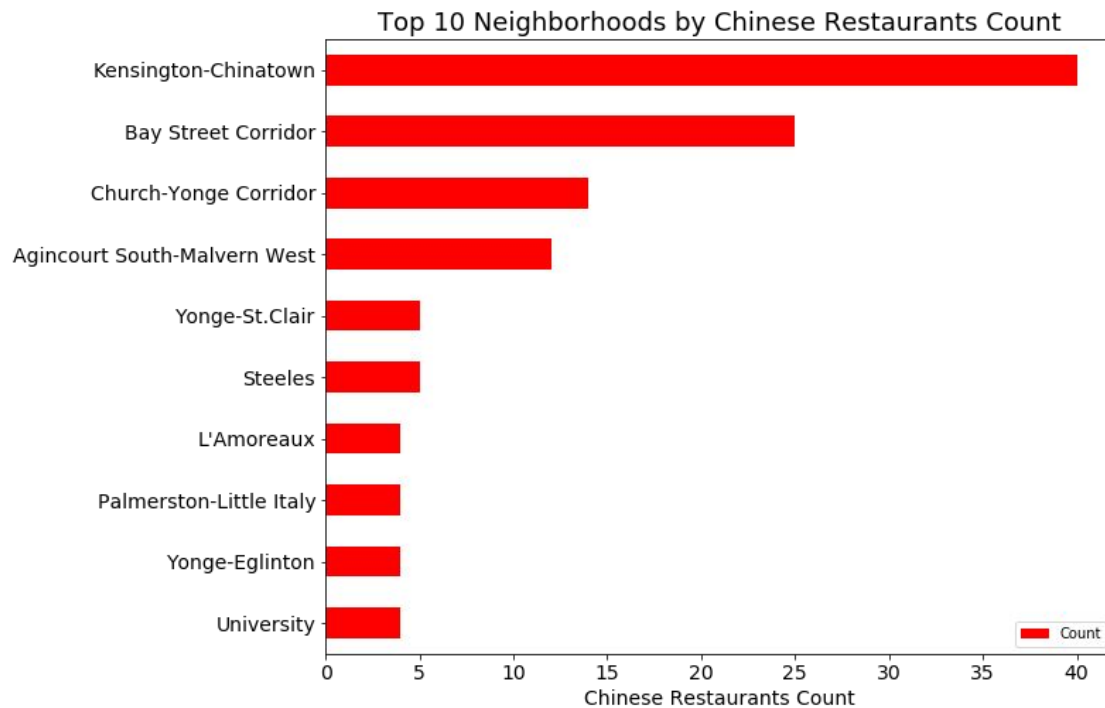● Create a Choropleth Map
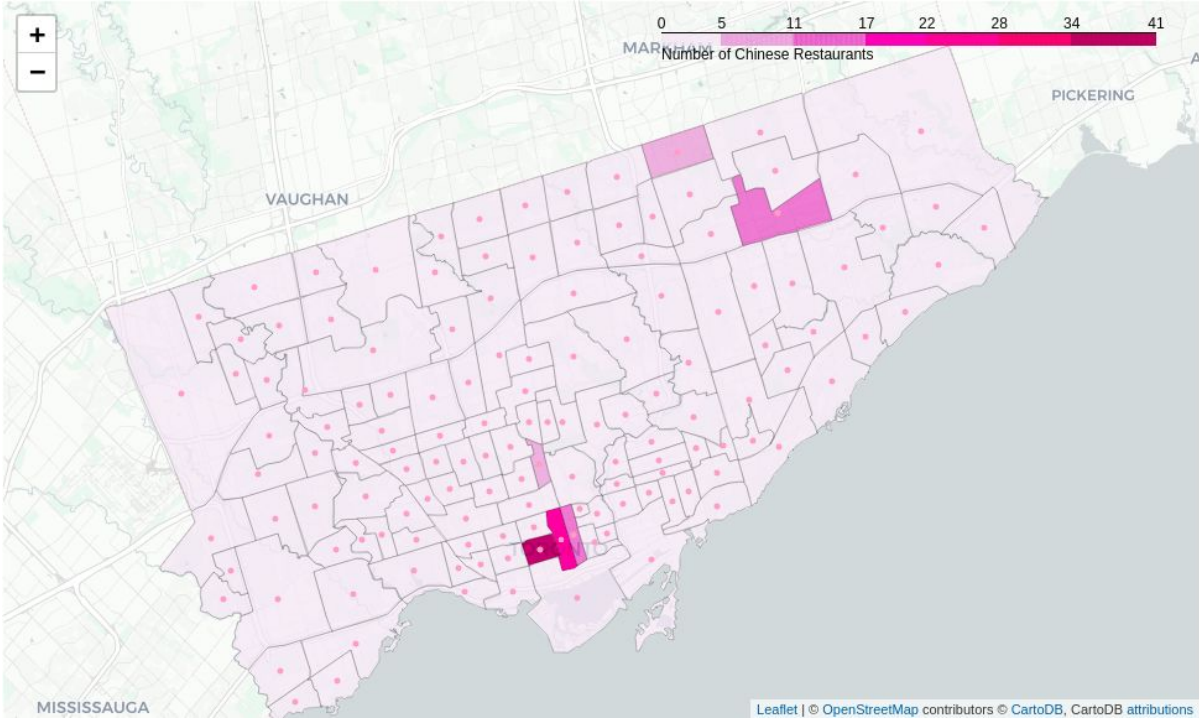● Make conclusion

Neighborhoods in Toronto

Chinese Restaurants in Toronto

Neighborhoods Top

Top 10 Neighborhoods by Chinese Restaurants Count

Choropleth Map

Results

There are more than 150 Chinese Restaurants in Toronto, most of them is situated at Kensington-Chinatown and other neighborhoods at the South Part of Toronto

Discussion

Now we can see the neighborhoods that are popular among Chinese people and here is a point that should we open a restaurant in the neighborhood with a lot of similar places? Result Map shows that a few neighborhoods is popular for Chinese people, so it would be better to open a restaurant in a neighborhood with "middle" number of it, such as Yonge-St.Clair or Steeles.

Conclusion

Now we can answer the questions from the beginning:

1. Church-Yonge Corridor, Agincourt South-Malvern West, Bay Street Corridor, Kensington-Chinatown are the neighborhoods with the largest number of Chinese Restaurants in it
2. According to the Choropleth Map more than 90% Neighborhods in Toronto lack Chinese Restaurants.
3. Using Choropleth Map we can look at neighborhoods with the largest number of restaursnts and decide wich parts of Toronto is popular for Chinese diaspora, so it might be profitable to open a Chinese restaurant in neighborhoods contiguous to them.
4. Kensington-Chinatown is by far the most popular area among Chinese Community in Toronto