**Introduction**

The problem that is going to be analyzed is the distribution and ratings of Italian restaurants in Toronto, Ontario, Canada.

The targeted audience is a prospective restaurateur that would like to open an Italian restaurant in Toronto. The specific answer we are trying to ascertain is whether a restauranteur should open an Italian restaurant in Toronto. This will be based on determining how many Italian Restaurants are currently in Toronto and how those existing restaurants are distributed across Toronto’s neighborhoods.

**Data**

The data that will be used for this analysis included population statistics for Toronto as well as Foursquare data related to the distribution and rating of Italian restaurants in Toronto. Additionally, neighborhood data for Toronto will be uploaded into the analysis to help determine neighborhood related distribution.

**Methodology**

To conduct this analysis, the following information steps were taken:

* 1. Imported all necessary python libraries.
  2. Imported Toronto neighborhood data
  3. Determined geographical location data for Toronto
  4. Imported Foursquare credentials
  5. Created a map of Toronto that highlighted neighborhoods
  6. Conducted Foursquare search of Italian Restaurants
  7. Explored Results of Foursquare search
  8. Retrieved ratings for all Italian Restaurants in Toronto
  9. Plotted all Italian Restaurants on Toronto Map
  10. Plotted all Italian Restaurants on Toronto Map with Neighborhood

**Results**

The results of the analysis highlighted that there are eight Italian restaurants in Toronto, as identified by Foursquare. With a population of 2,930,000 residents, there is an Italian restaurant for every 366,000 residents.

When the eight Italian Restaurants are plotted on a map of Toronto (red circles), especially when compared against the location of neighborhoods in Toronto (blue circles), it highlights that Toronto neighborhoods are overwhelmingly underserved with Italian eateries.

**A close up of a map

Description automatically generated**

**Discussion**

Given the size of a metropolitan city like Toronto, with a population of nearly three million residents, one may expect to see significantly more Italian restaurants in Toronto. With only eight restaurants identified via Foursquare searches, it appears that the Toronto market is underserved with Italian Restaurants.

One interesting piece of information from this analysis was the lack of ratings of Italian restaurants via Foursquare. Of the 8 restaurants identified by Foursquare, only two had received any reviews. Of the two restaurants that were reviewed, one was an international pizza chain, Sbarros. This means only one real Italian eatery in Toronto has been reviewed via Foursquare.

What would have improved this analysis would be to determine the rate of Italian Restaurants in other cities of similar size across North America such as: Montreal, Chicago, New York City, and Philadelphia. This may would have provided additional context to the one Italian restaurant per 366,000 residents ratio.

While I can draw some conclusions about the data that was provided via Foursquare, my main conclusion is that Foursquare is not an appropriate data source to make a recommendation to this restauranteur. A quick Google search identified numerous articles stating the “Best 10 Italian Restaurants” or the “Best 15 Italian Restaurants” in Toronto. This shows me that the results I received from Foursquare (with only 8 results) are insufficient to make a real recommendation as they are obviously incomplete.

**Conclusion**

To answer the most basic question of whether a restaurateur should open an Italian restaurant in Toronto, the answer appears to be Yes. Overall, there was one Italian restaurant per 366,000 residents in Toronto, which indicates that it is an underserved market. Further, there were significantly more neighborhoods than Italian restaurants throughout Toronto, which highlights that there were significant portions of the city without an Italian eatery.