

Site Selection for Japanese Restaurants in Toronto

IBM Data Science Capstone

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Introduction

Japanese cuisine is extremely popular throughout North America, primarily in suburban and urban metros like Toronto. Diners frequently patronize Japanese restaurants for Japanese-themed ambience and quality food including sushi, ramen, udon, etc. A good location is crucial to the new restaurant's performance as it will have a great impact on customer volume and customer type. This study explores all the neighborhoods in Toronto in terms of the frequency of occurrence of Japanese Restaurants. Cluster analysis is applied to group similar neighborhoods together. Through visualizing the resulting clusters on the map, we are able to gain a clearer understanding of how the Japanese restaurants are distributed across all the neighborhoods in Toronto. This project aims to help solve the business problem: Where's suitable to open a Japanese restaurant in Toronto?

This study targets entrepreneurs who are thinking about starting a Japanese restaurant in Toronto. Opening a Japanese restaurant is a challenging yet potentially rewarding venture given the popularity of Japanese cuisine in metro cities. Entrepreneurs would be interested to know how the Japanese restaurants are saturated across neighborhoods in Toronto and find out how many competitors are nearby.

Data

To get the list of all the neighborhoods in Toronto, we parsed the Wikipedia page (https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M). Since we are only interested in urban area, the final list contains 38 neighborhoods in 4 boroughs. Latitudes and longitudes of these boroughs could be obtained using Python Geocoder package, but a csv file contained all of the geographical coordinates was already provided by the course.

Venue data for each neighborhood were gathered using Foursquare API. Foursquare's global database contains 105 million places, which empowers users to explore points-of-interest conveniently and accurately. In the Foursquare dataset, "Japanese Restaurant" and "Sushi Restaurant" are two separate categories. However, in our project, we would like to consider both as "Japanese Restaurant".