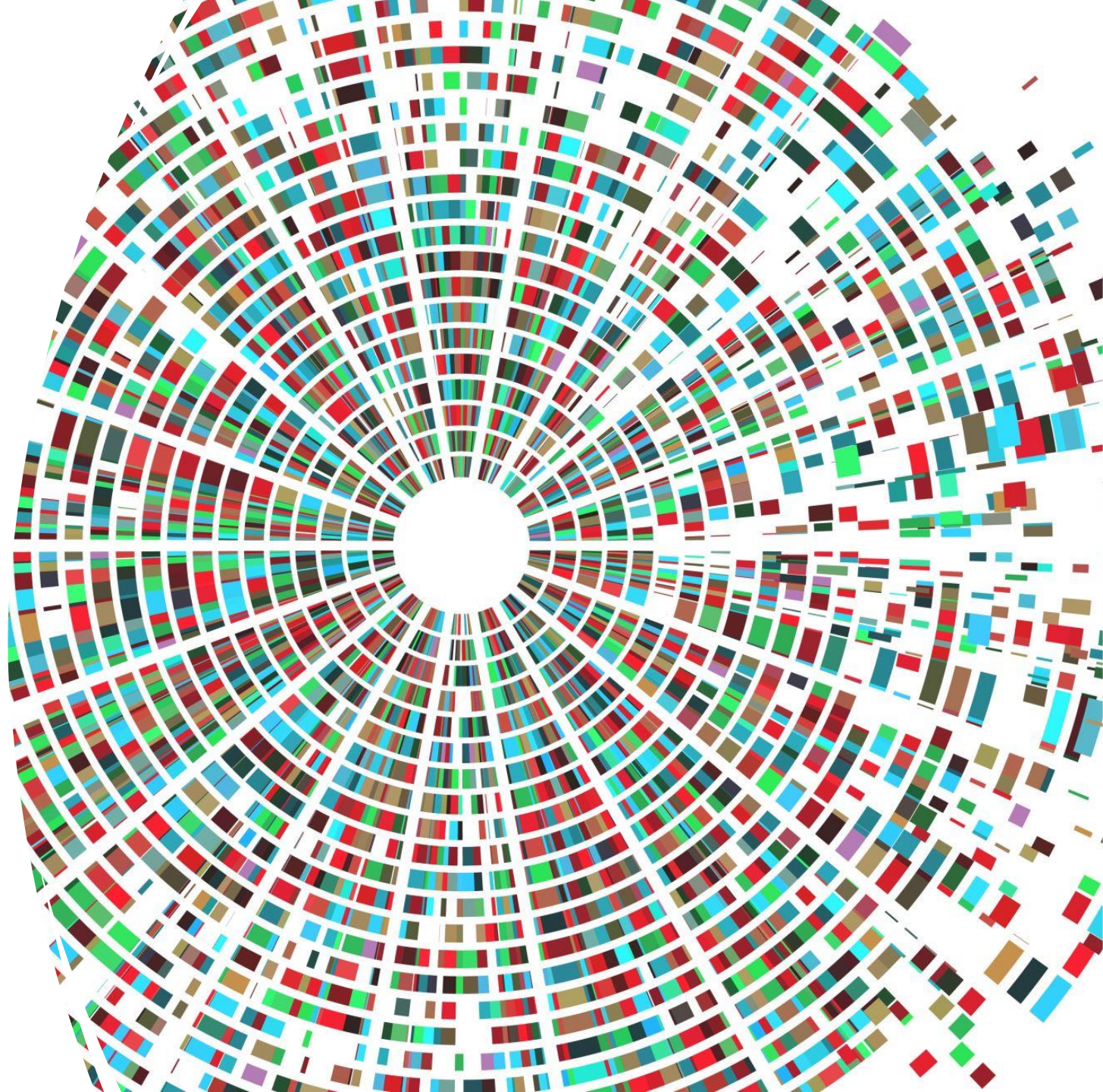


IBM DATA SCIENENCE CAPSTONE PROJECT

**The best location in
Toronto to open a new
Japanese Restaurant**



Agenda

Introduction

Business Problem

Target Audience

Data

Methodology

Result

Recommendation

Introduction

1

This the last project of IBM Data Science course.

2

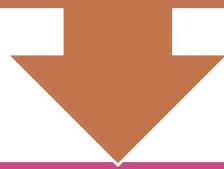
Author is Japanese lives in the US and studying business.

3

The purpose of this project is to find the best place to open a new Japanese restaurant in Toronto.

Business problem

The goal of this project is to find out the most suitable places to open a new Japanese restaurant.

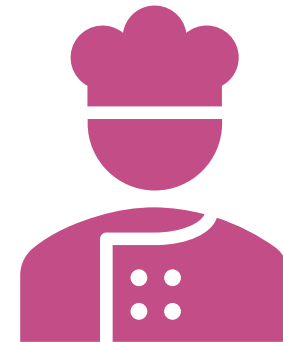


Using Machine learning, I identified groups of locations that have similar attributes and spot the best group of locations to open a new Japanese restaurant.

Target Audience



Entrepreneurs who want to open a new Japanese restaurant in Toronto.



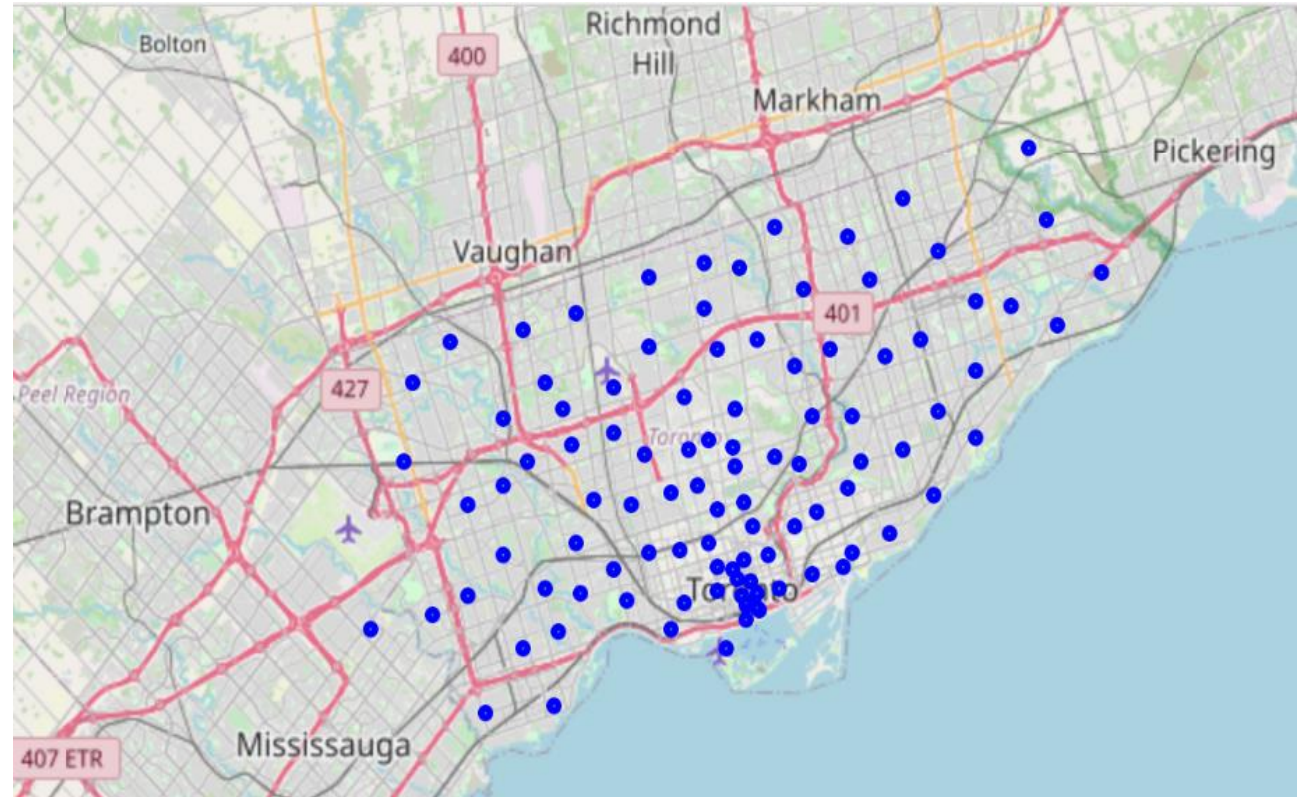
Japanese restaurant owners who want to open new one or want to change the current location.

Data

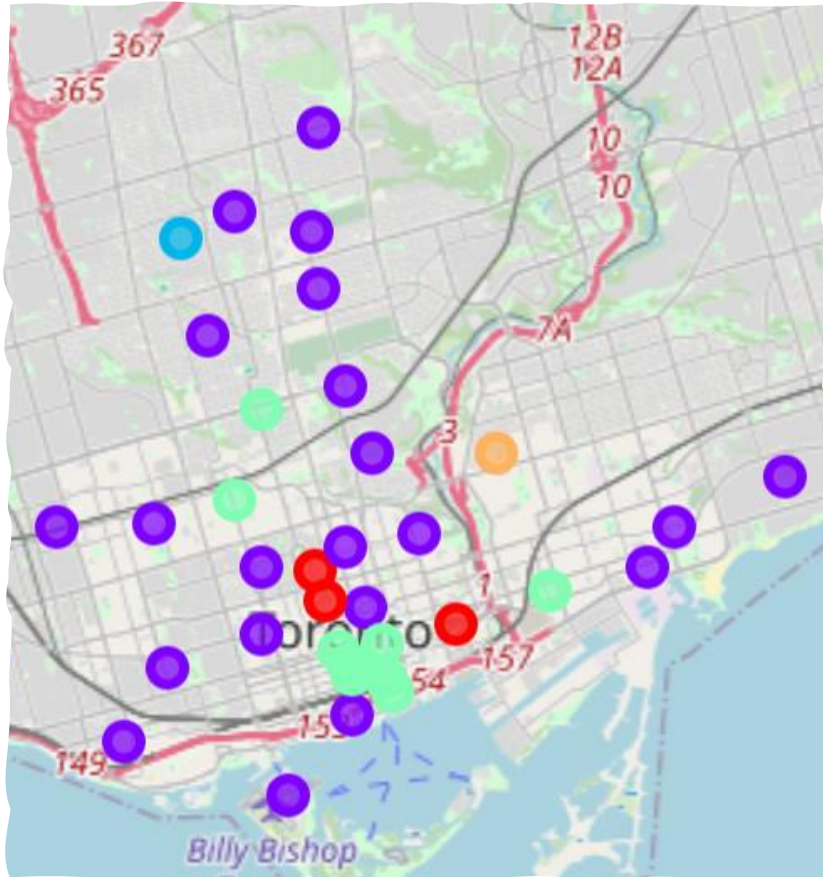
- List of neighborhoods in Toronto, Canada (from Wikipedia)
- Latitude and Longitude of those locations ([https://cocl.us/Geospatial data](https://cocl.us/Geospatial_data))
- Venue data of Toronto (from FourSquare)

Methodology

- Obtain the list of neighborhoods in Toronto from Wikipedia using the web scraping with BeautifulSoup.
- Get each coordinate of the location in Toronto
- Use Foursquare API to pull the list of top 30 venues.
- k-means clustering to categorize neighbors into five groups.



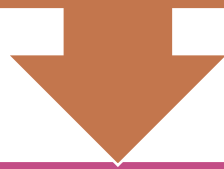
Result



- **Cluster 1 (purple):** Various restaurants, bars, dessert shops, indicating that those places are the destination for foodies. Some location is famous for Japanese restaurants and Sushi restaurants
- **Cluster 2 (green):** Especially famous for coffee shops, American restaurants, and sea food restaurant
- **Cluster 3 (red):** Famous for coffee shops but there are not many restaurants unlike cluster 2. However, there is one neighbor that has famous Sushi restaurants.
- **Cluster 4 (orange):** Known for other countries' food such as Greek restaurants, Italian restaurants, and Caribbean restaurants.
- **Cluster 5 (blue):** This neighbor does not have much restaurants but is famous for ice cream shops.

Recommendation

I suggest that entrepreneurs open a new Japanese restaurant at location in either cluster 1 or 2.



Those locations are the destination for lunch and dinner. Therefore, it is relatively easy for a new restaurant to be noticed by customers without doing much effort, comparing to other groups of locations. One disadvantage of these cluster is that there are many competitors in those locations.