The Battle of Neighborhoods: Exploring

Montreal Neighborhoods to find the best

location for Korean restaurant.

Olga McIngvale

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▶This project aims at exploring and segmenting the city of Montreal to give the recommendations to potential investors which were looking for the best place to open the Korean restaurant.
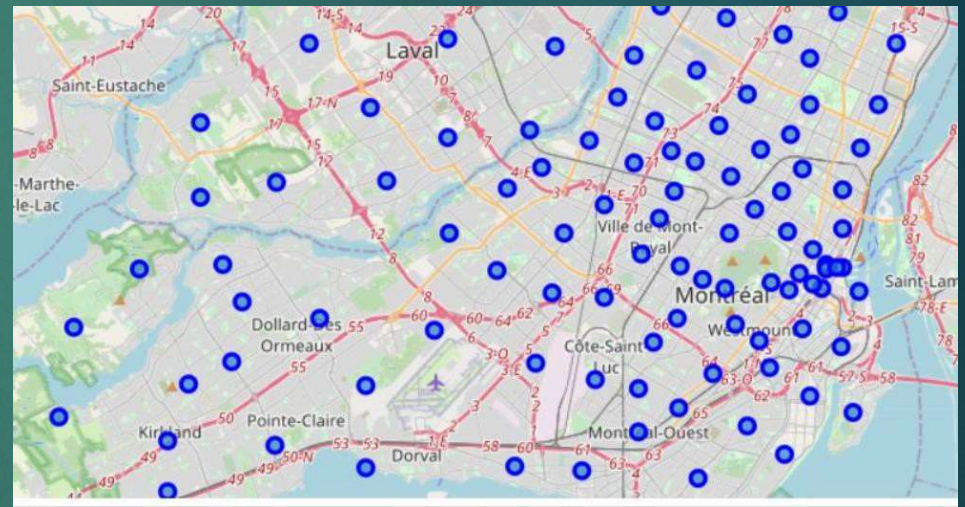
Data

- Wikipedia data "List of postal codes of Canada: H" for the Metropolitan Montreal (https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_H)

- Open-source geocoding Nominatim from geopy

- Foursquare API

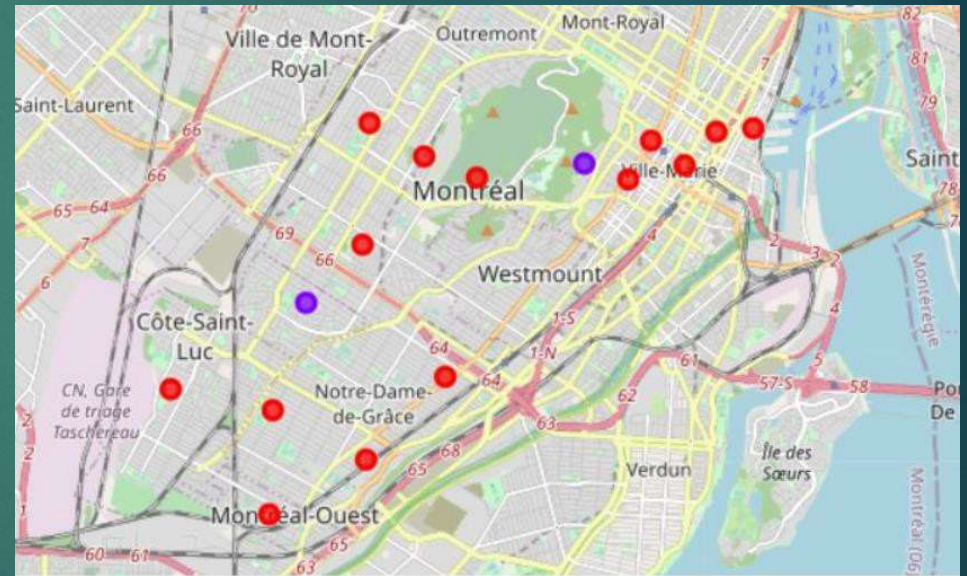- Data have been scraped by using the BeautifulSoup package

▶Methodology

▶In this project, we will search for venues using Foursquare API and then cluster our Montreal neighborhoods based on common venues via clustering algorithm Kmeans.

▶We used a great visualization library Folium to create a map of Montreal using latitude and longitude values.

▶Analysis

▶Only city center locations considered.

▶The dataset includestop 10 venues for each neighborhood.

▶Clustering algorithm (unsupervised process for the unlabeled dataset) K-means applied.

Results and Discussion

- Cluster 1 (red circles) zones are crowded with restaurants as the most common venues

- Cluster 2 (purple circles) zones are not crowded with restaurants at all. We will choose between Downtown Montreal Southwest and Hampstead / Côte Saint-Luc (below).

- Downtown Montreal Southwest could be the best one since it includes large green spaces and recreational facilities. That is a popular area and could be the best location to open the new Korean restaurant.

Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
Downtown MontrealSouthwest	Historic Site	Park	Scenic Lookout	Mountain	Performing Arts Venue	New American Restaurant	Nightclub	Noodle House	Paper / Office Supplies Store	Pastry Shop
Hampstead / Côte Saint-Luc	Park	Big Box Store	Food Service	Yoga Studio	Performing Arts Venue	New American Restaurant	Nightclub	Noodle House	Paper / Office Supplies Store	Pastry Shop

Conclusion

- By using Foursquare API we found the most common venues and then clustered our neighborhoods based on common venues.

- The optimal location to open a new restaurant will be offered to stakeholders for the final decision.