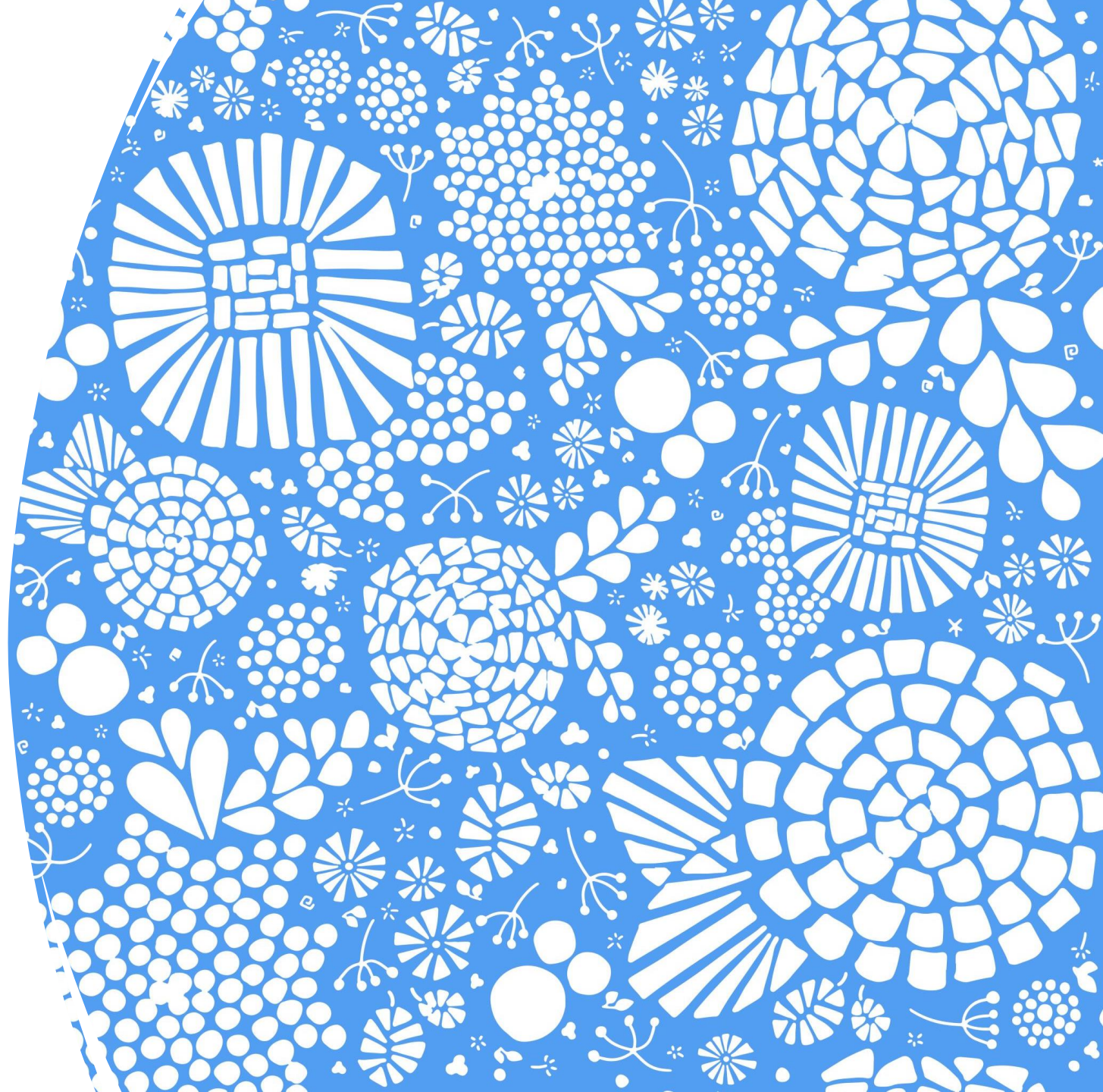


ITALIAN RESTAURANT: TORONTO OR NEW YORK?

IBM DATA SCIENCE CAPSTONE



Research Question:

For a new Italian restaurant business, what neighbourhoods in New York and Toronto are best?

It is important to identify trendy neighbourhoods (i.e. those with a good nightlife and concentration of restaurants) as well as clustered areas before planning the opening of a restaurant business

Data acquisition and cleaning

We will collect Toronto and New York neighborhoods data (the former from the wiki page and the latter from csv), convert it to a pandas dataframe, clean and pre-process it.

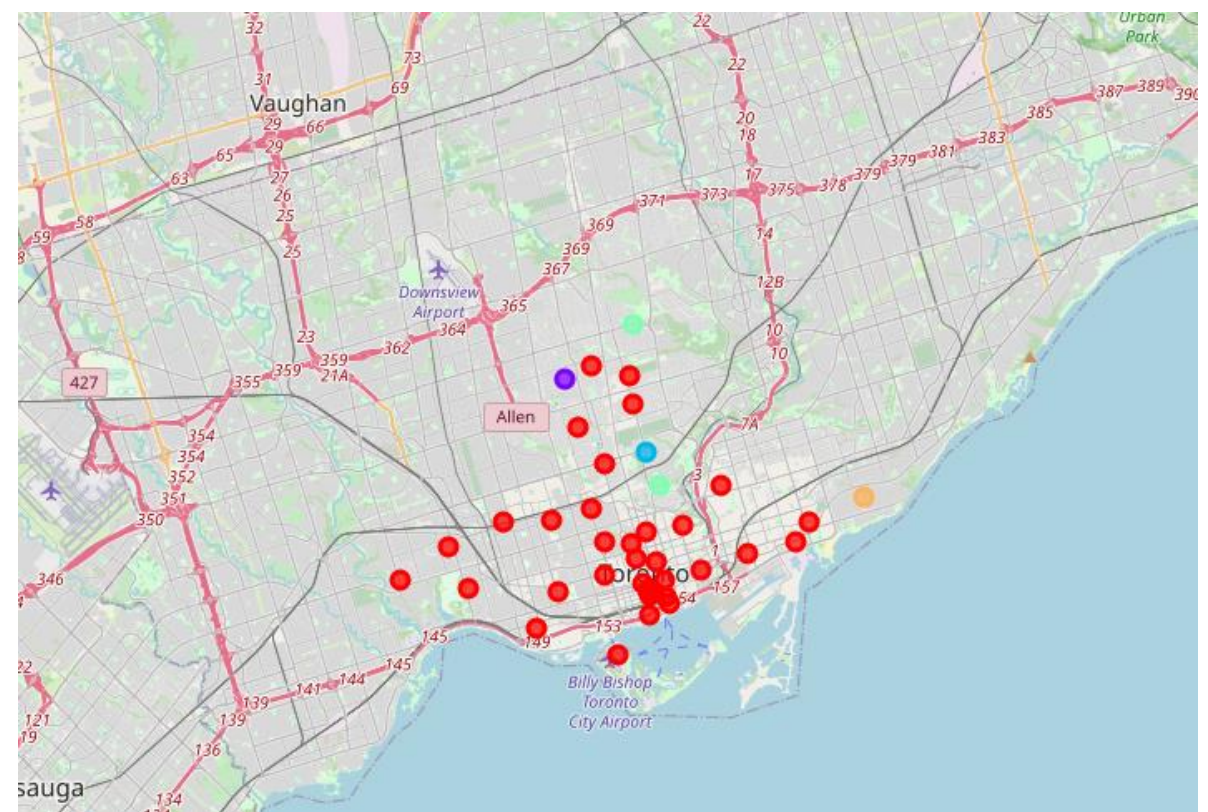
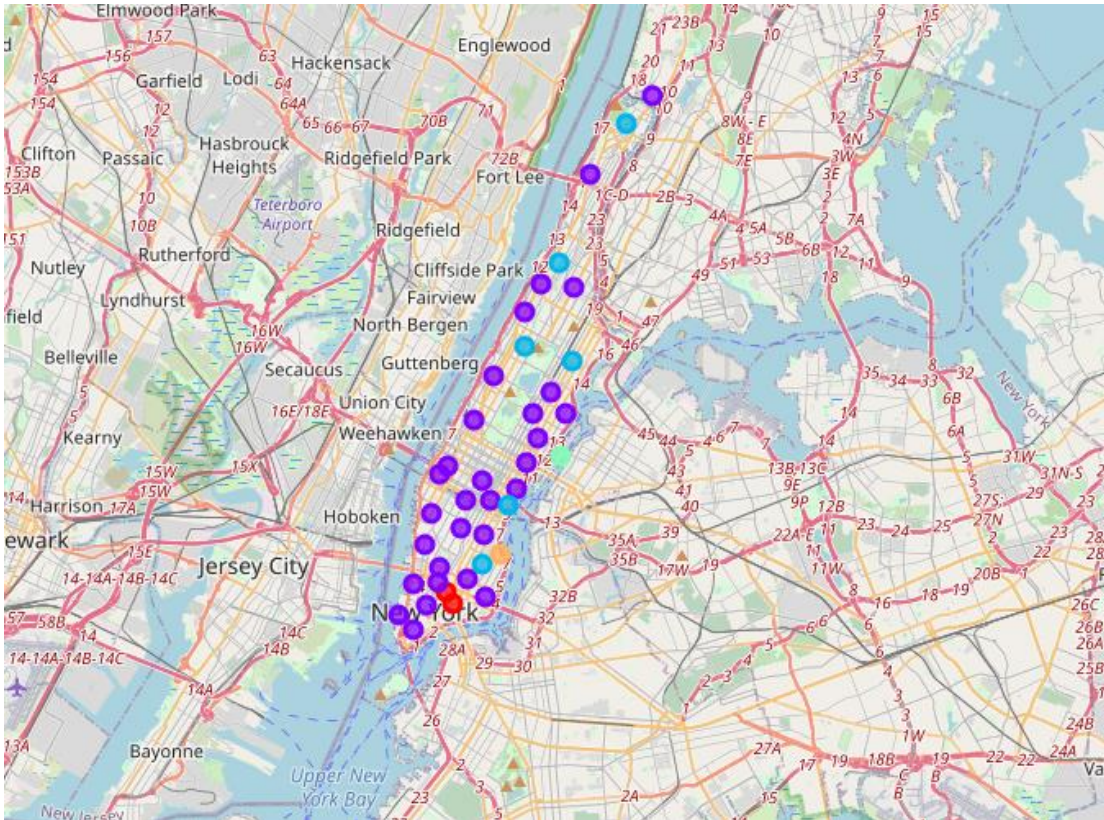
- We then explore and cluster neighbourhoods in both cities and provide insights to someone willing to open an Italian restaurant.

Methodology

- Web scraping Wikipedia page for neighbourhoods list
- Obtain coordinates using Geocodre
- Get venues data through Foursqyare API
- Group data by neighbourhood and describe by mean frequency of occurrence
- Perform clustering using k-means algorithm
- Visualise clusters using Folium

Results

Neighbourhoods Categorised in 5 clusters.



Discussion



NEW YORK

- Cluster 2 is the most popular in terms of coffee shops and cafes, with 39 neighborhoods.
- On the other hand, the other clusters are much smaller, with very few coffee shops
- In cluster 2, Italian restaurants are generally very trendy, however there are places where they are not very common. The fact that their presence is generally high in the cluster indicates that there is market for it. We should therefore consider neighborhoods where Italian restaurants are not very common, such as The Financial District or Murray Hill.

TORONTO

- The first clusters is the most popular in terms of coffee shops and cafes, with 32 neighborhoods.
- On the other hand, the other clusters are much smaller, with very few coffee shops
- Three out of five clusters have only one neighborhood
- Cluster 3 is best for parks and outdoor activities.

Recommendations and Conclusions

Both cities have a good concentration of Italian Restaurants in their main clusters, signalling that it might be a good business in both cities central area. It would be good to look at neighbourhoods with a nearby presence of italian restuarants, but with none or only few in the nearest area. These could be the Financial District or Murray Hill in New York or Kensington Market and Grange Park in Toronto.

**THANK
you!**

