The background is a complex collage of financial data visualizations. It includes several line charts with fluctuating data points, some with shaded areas representing trends. There are also bar charts and a large data table with multiple columns of numbers. The overall color scheme is a mix of dark blues, greys, and warm oranges, creating a professional and data-driven aesthetic.

# Neighborhood Recommender System

Capstone Project –  
The Battle of  
Neighborhood

# Project Goals

- This project tries to create a content-based recommendation system for assisting immigrants in choosing a neighborhood based on the way they rank a number of lifestyle categories.
- A recommendation system suggesting suitable neighborhoods for new expats, could be a value-added feature to existing recommendation platforms as Tripadvisor, Foursquare, Time Out etc. where the user can be guided on a suitable Neighborhood for him and relative venues can be suggested around this area basis his profile.

# Data acquisition and Cleaning

- Our first data source is wikipedia page containing list of postal codes  
[https://en.wikipedia.org/wiki/List\\_of\\_postal\\_codes\\_of\\_Canada:\\_M](https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M)
- CSV file containing coordinates: [https://cocl.us/Geospatial\\_data](https://cocl.us/Geospatial_data)
- For the venue categories: **Foursquare API**  
<https://developer.foursquare.com/docs/api/venues/explore>

# Results

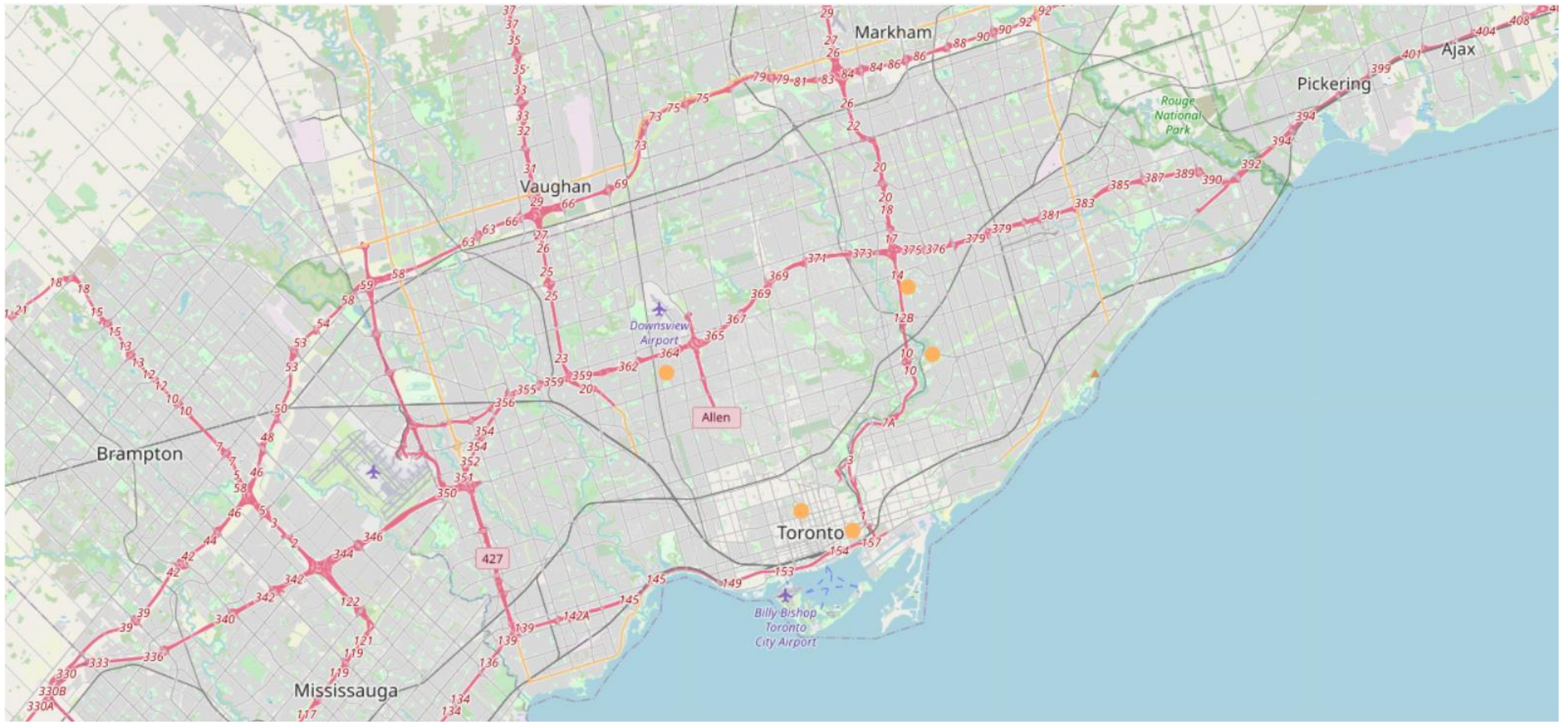
The clustering approach resulted in 5 neighborhoods which are best places for immigrants who are looking for a place to move in Toronto, Canada.

```
In [82]: compare=neighbourhoods_venues_sorted.loc[neighbourhoods_venues_sorted['Neighbourhood'].isin(result['Neighbourhood'])]  
compare
```

Out[82]:

	Neighbourhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
45	Lawrence Manor, Lawrence Heights	Shopping	Personal_care	Health_Fitness	Restaurants	Leisure
61	Parkwoods	Shopping	Kids_Friendly	Leisure	Transportation	Food_markets
62	Queen's Park, Ontario Provincial Government	Shopping	Restaurants	Kids_Friendly	Fast_Food	Nightlife
63	Regent Park, Harbourfront	Shopping	Nightlife	Food_markets	Culture	Kids_Friendly
85	Victoria Village	Restaurants	Shopping	Fast_Food	Leisure	Transportation





# Conclusion

- Relocation is a big challenge for everyone. In this project we tried to visualize Toronto Neighborhoods as clusters created basis common features of a number of lifestyle categories and create a recommendation system for suggesting the top 5 Neighborhoods a new visitor/expat could select basis the importance each has to him. Such a system with necessary refinement and development as mentioned in the discussion section could be scaled to include all the major cities globally where a platform with records of user profiles and preferences could provide personalized recommendations for each user.