




Strategic Location for Purchasing a Residential Property for Short- term Rent Out (Airbnb)

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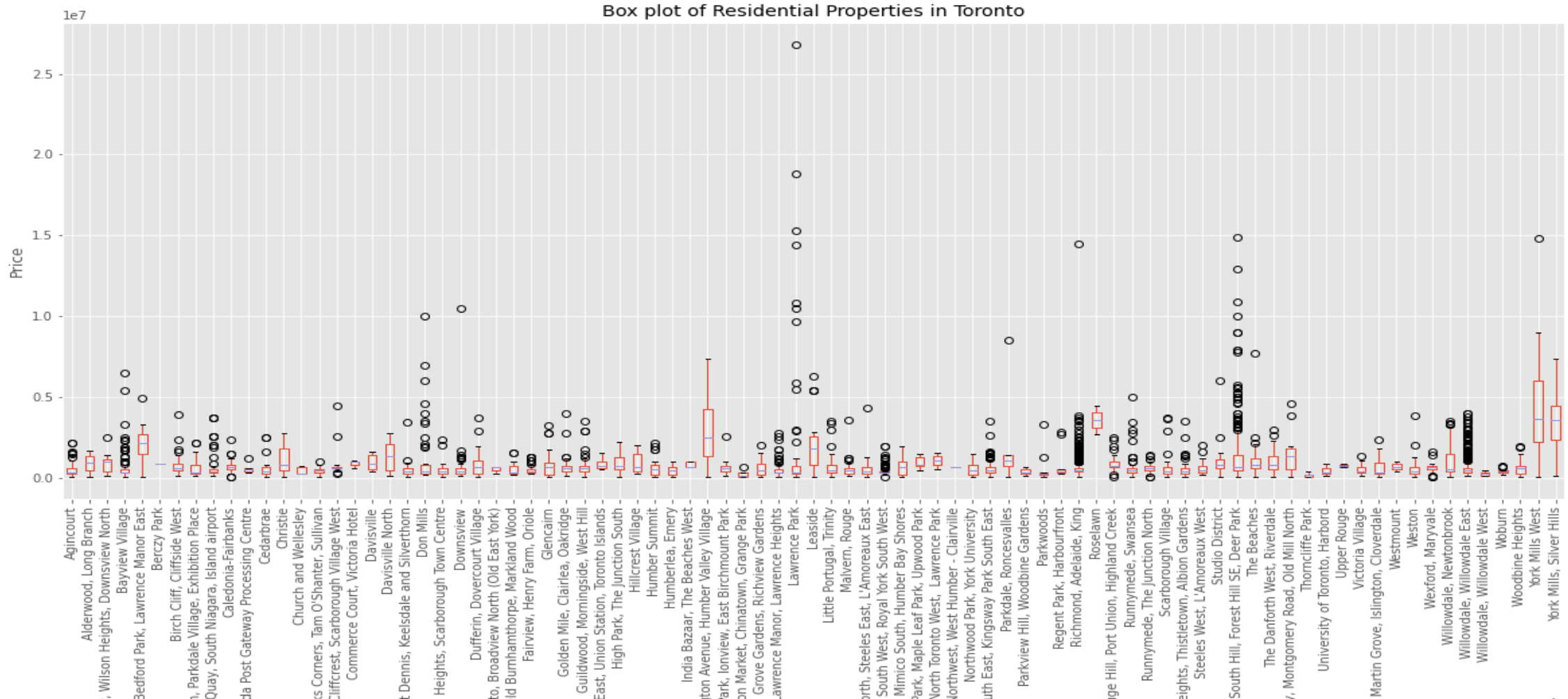


- Airbnbs are becoming more popular. They offer cheap short-term stay while providing the convenience of a complete property.
- A client is looking for the best neighbourhood to purchase a residential property to rent out as an Airbnb.
- Anyone with interest in short-term accommodation industry in Toronto could potentially benefit from this analysis. The main target audience, however, is those who seek cheap housing to purchase and rent out as an Airbnb.

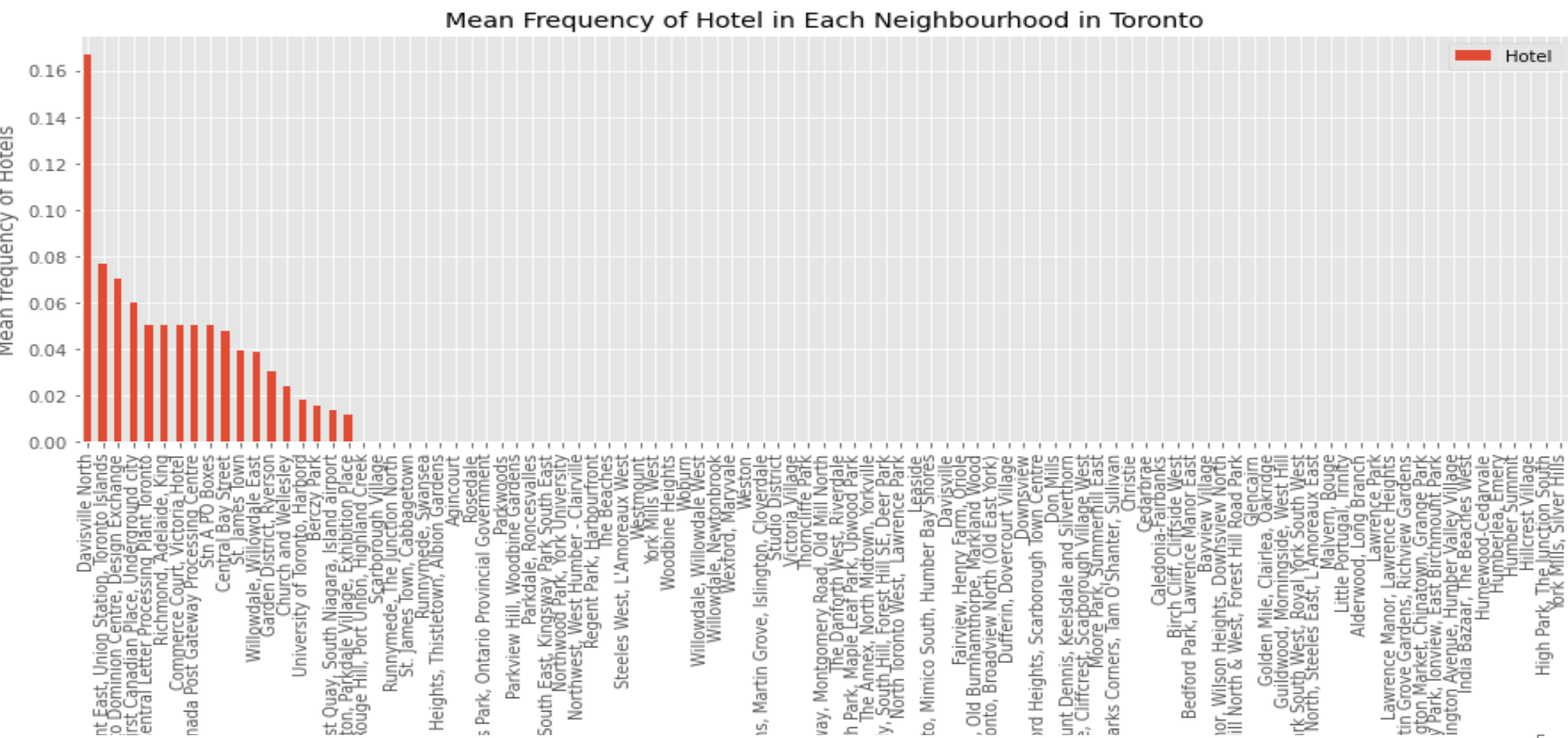
Data acquisition and cleaning

- Foursquare API will be used to fetch data on venues in the neighbourhoods of Toronto. Neighbourhood names will be retrieved and scraped from Wikipedia (https://en.wikipedia.org/w/index.php?title=List_of_postal_codes_of_Canada:_M&oldid=945633050) based on their borough and postal codes.
- To find out the price of residential properties in Toronto we use the data file provided in the following address which gives us the price, neighbourhood, and geo-coordinates of many residential properties in Toronto: <https://www.kaggle.com/mnabaee/ontarioproperties>

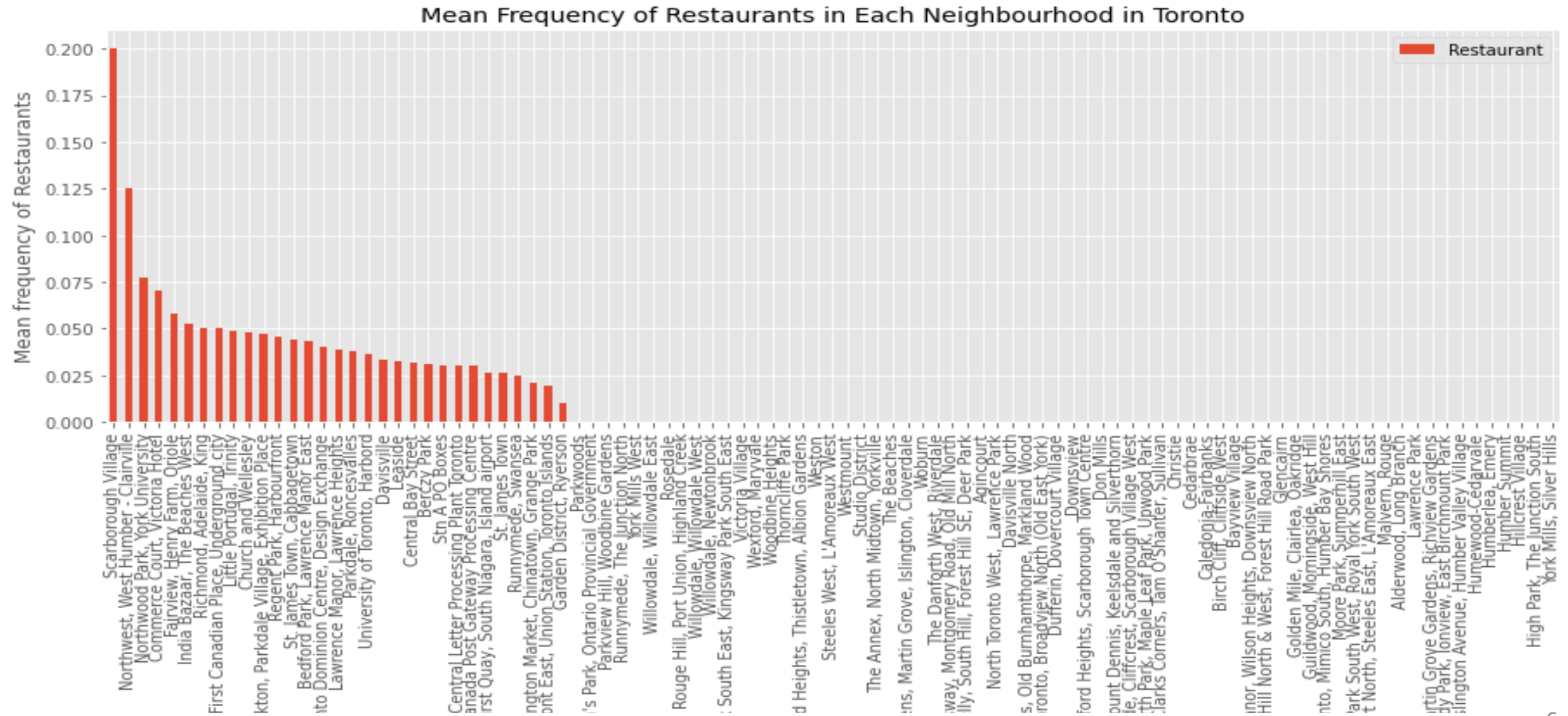
Representative value for price of residential properties

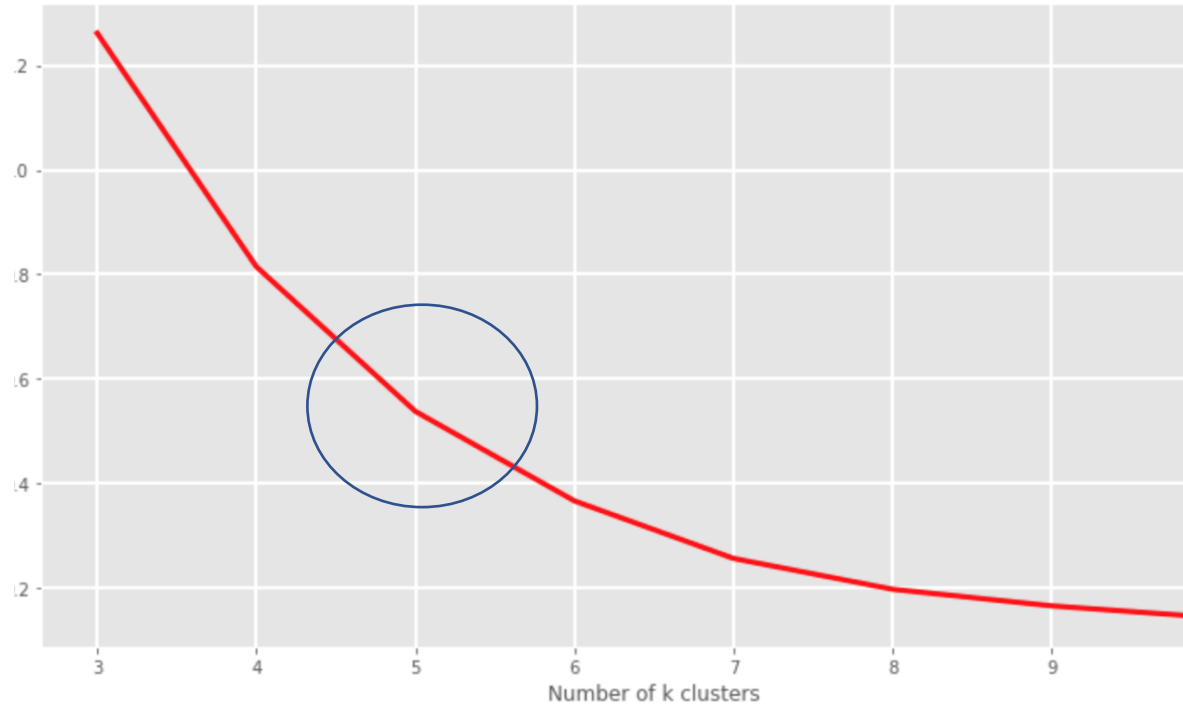


Mean Frequency of Hotel in Each Neighbourhood in Toronto



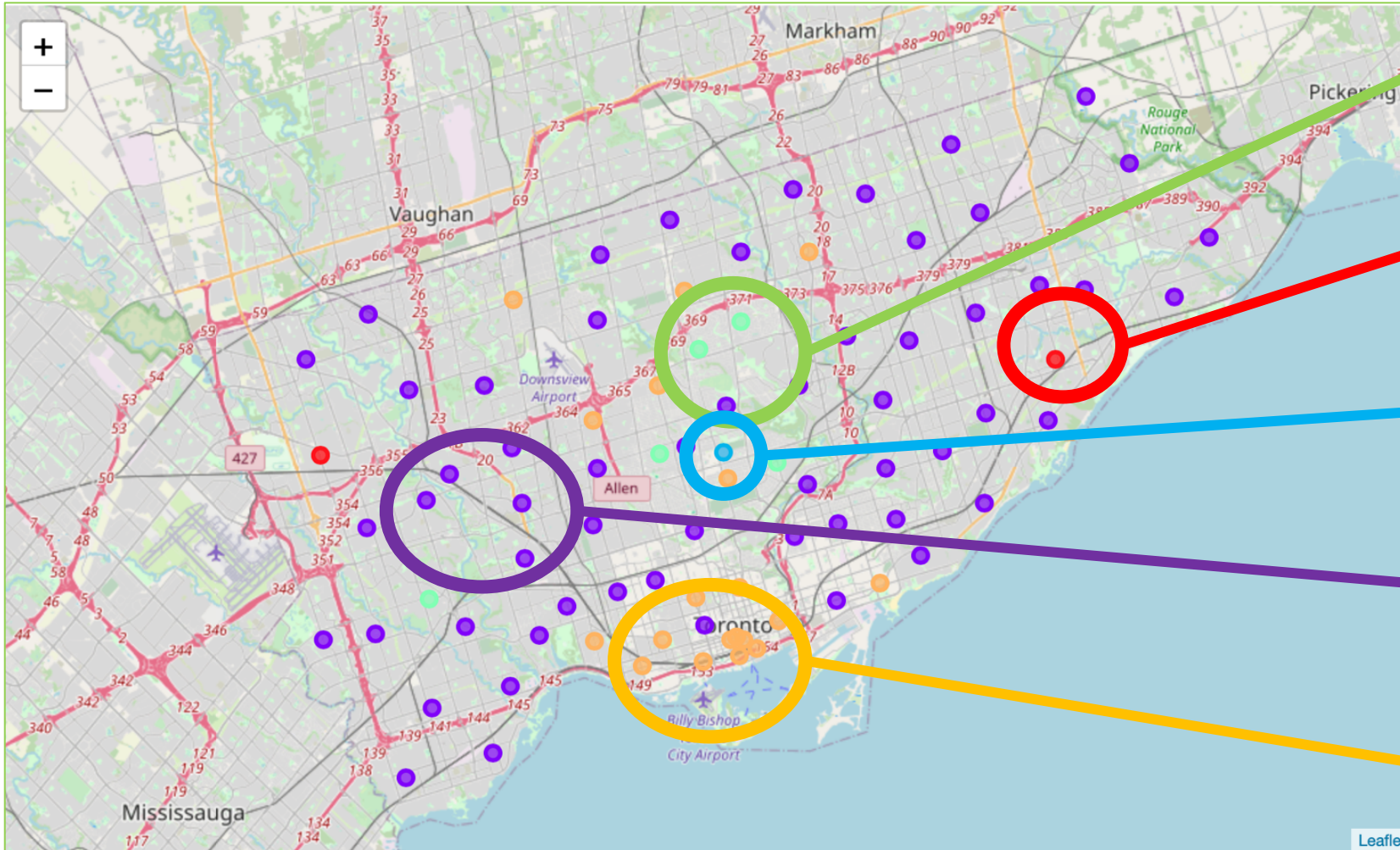
Mean Frequency of Restaurants in Each Neighbourhood in Toronto





Finding the
optimal number
of clusters (k)

Result and discussion



high hous. price
few hotels
few restaurants

low hous. price
few hotels
many restaurants ✓

high hous. price
many hotels
few restaurants

med hous. price
few hotels
few restaurants

med hous. price
med hotels
med restaurants ✓

Conclusion and future directions

- the aim was to recommend the best neighbourhood for a client to invest in by purchasing a residential property to rent out as an Airbnb.
- assumed that the main decision criterion would be high number of restaurants in the vicinity of the property.
- **there are two neighbourhoods Northwest and Scarborough Village are the first choices to consider.**
- Since we used the housing price data from 2016, one could find a more recent data with more samples in order to find a more reliable data on the property values.
- our assumption of features was restricted to restaurants while it could be expanded to other categories such as park, museums, and coffee shops.
- Other methods of clustering can be explored too in order to find better cluster or number of clusters
- one could use scraping to extract the data of location and pricing from Airbnb in order to analyse the competition in more detail.