Deciding optimum location for opening a café in Toronto

Introduction

- Using data is highly desirable in any scenario to maximise the output required

- Be it for opening a new café or predicting market conditions, manipulating data helps us find underlying patterns thereby giving us a holistic picture before making decisions

- Predicting the optimal place for opening a new café for a business owner has certain advantages:
  - Better understanding of the present market (present café locations)
  - Better chances of getting the desired profits in a lesser timespan

Data Acquisition

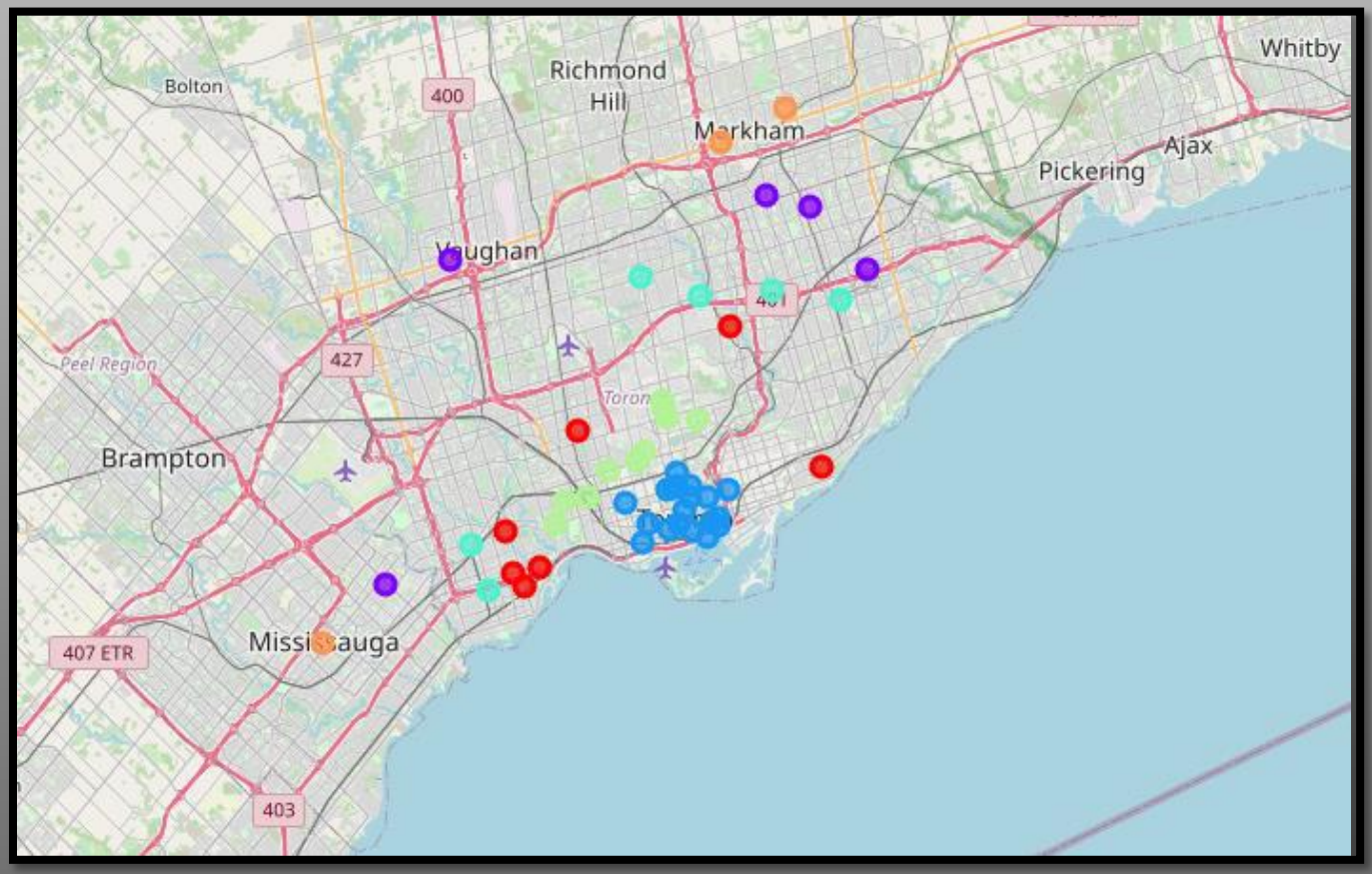
- Toronto neighbourhood names taken from the Wikipedia page
  - https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M.

- Locations for cafes searched using Foursquare API

- Category ID for Café taken from Foursquare documentation
  - https://developer.foursquare.com/docs/build-with-foursquare/categories/
  - Category ID for Café: 4bf58dd8d48988d16d941735

Model and Visualisation

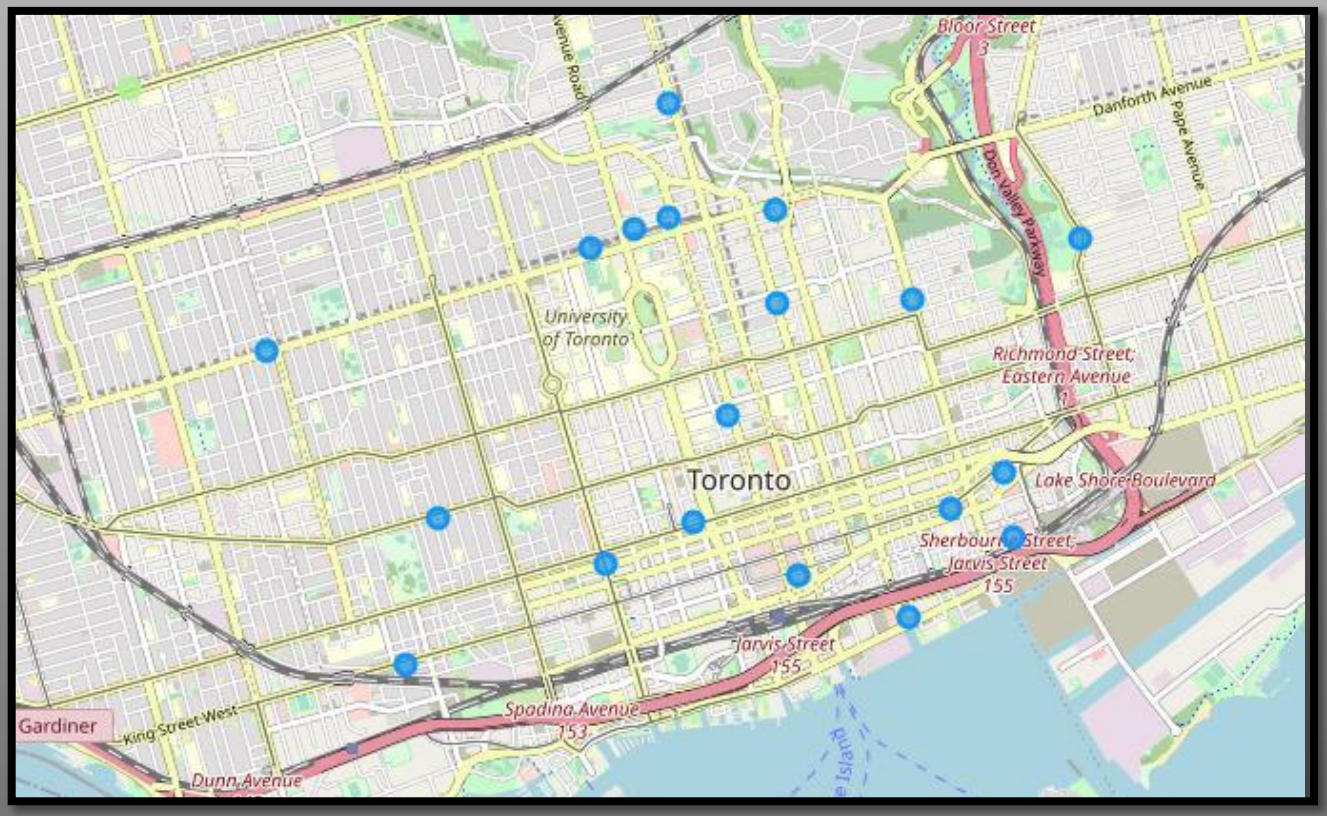
- Since the purpose is to decide an optimum location, clustering the data and visualising it will give a direct overview of the possible areas where the café could be started
- Used a K means clustering model, with parameters set at using ‘k++’ and number of clusters as 6



Insights from model

- The visualisation shows us that there is a high density of cafes closer to Lake Ontario and to the University of Toronto Campus.

- Many cafes are located in close proximity to major roadways



Conclusion and Future Scope

- The new café can be opened in a slightly less café density area, probably on the eastern side of Don valley Parkway, slightly away from the Lake but not too far.

- The clustering model gives us a fair idea of the overall distribution of cafes

- The model can further be optimised by taking into consideration a lot of other factors such as menu preferences, prices etc.

- Moreover, other data regarding the average spending of people at cafes etc can also be considered to further refine the model.