Capstone Project – Battle of Neighborhoods

IBM Data Science Professional Course

Introduction

- The Client's Problem & Criteria:
  - Desires to open a high-end Indian restaurant in Toronto
  - Wants maximal profit
  - Client is an award-winning chef, thus menu will be pricey
  - Affluent population should be nearby
- Target Audience
  - Those in the restaurant business looking to expand
  - Those thinking about opening a restaurant in the future

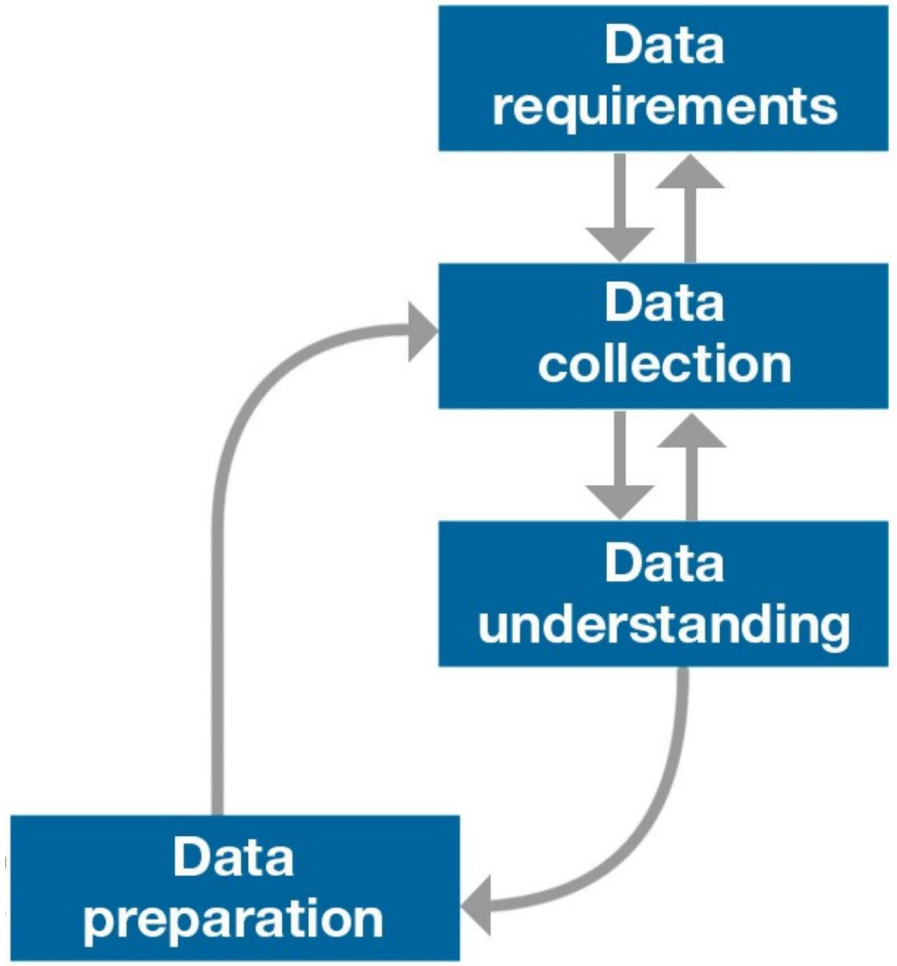
Upserve.com

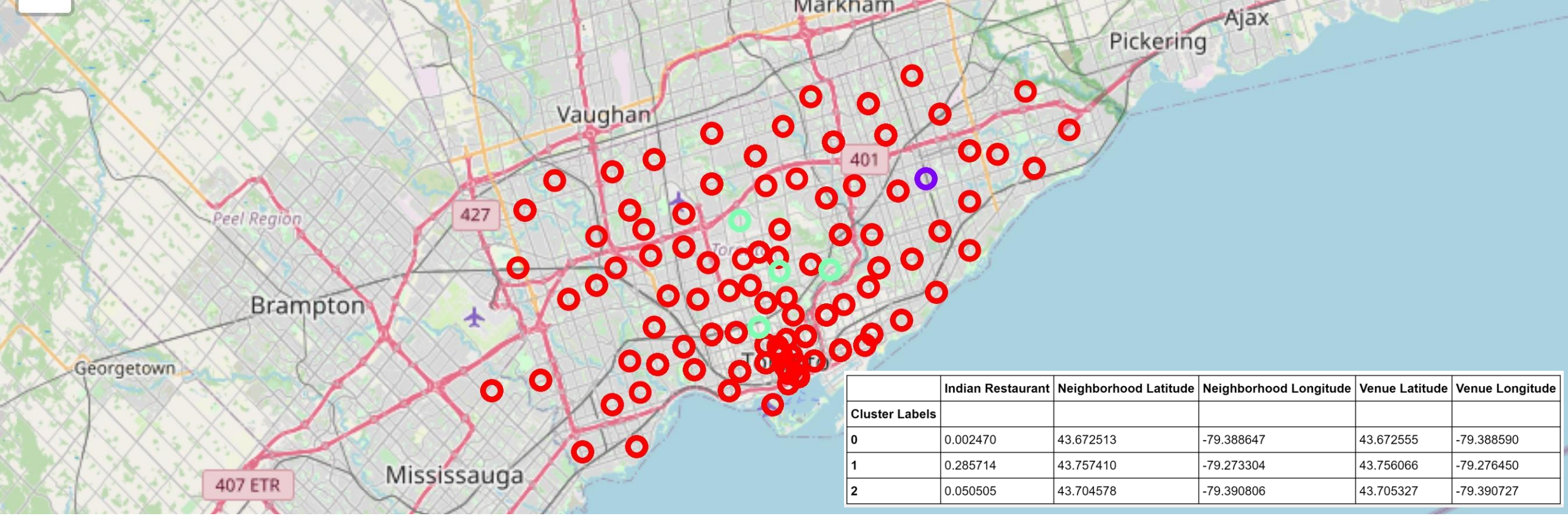
Data

- Foursquare API was called to find Indian restuarants in the Toronto area
- Location data obtained from Geocoder python package
- 2016 Census data compiled from the City of Toronto's Open Data Portal
- Postal Codes/ Neighborhoods list from Wikipedia

Methodology

- K-means clustering was utilized to create 3 distinct clusters
- Data collected only from free online websites
- Converting raw data into useful form (i.e. Pandas dataframe)
- Multiple lines of code to troubleshoot and verify accuracy of data





	Indian Restaurant	Neighborhood Latitude	Neighborhood Longitude	Venue Latitude	Venue Longitude
Cluster Labels					
0	0.002470	43.672513	-79.388647	43.672555	-79.388590
1	0.285714	43.757410	-79.273304	43.756066	-79.276450
2	0.050505	43.704578	-79.390806	43.705327	-79.390727

Results

- High concentration of Indian restaurants near Scarborough
- High income individuals just North of downtown Toronto, but more North leads to drastic decrease in household income
- Recommendation: Open near Rosedale-Moore Park or Yonge-St.Clair, as many high-income individuals are in the area and only a few Indian restaurants exist in the area, while still in a highly populated area