Coursera Capstone

IBM Data Science

Opening a new restaurant in Chicago

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- **Introduction:**

- Turkish Cuisine is a very luxurious kitchen. Filled with lots of different recipes and meals it would be an honor to spread it across the world. Toronto being as diverse and a hot destination for tourists, we believe there are lots of benefits to opening restaurants in this location. Entrepreneurs who own Turkish based restaurants that can fit with the wants and needs of the western culture would be a great target segment.

- **Business Problem:**
- The objective of this project is to analyze and select the best locations to build a restaurant. Choosing a location that is less crowded with restaurants but also not to far into the suburbs. Business question:
  - What is the better location to open a fine dining Turkish Cuisine in the area of Toronto

- **Target Segment:**
  - Target audience is franchise owners or those who are interested in opening up a Turkish restaurant in the city of Toronto.

- **Data:**
  - List of neighborhoods in Toronto

o   Latitude and Longitude coordinates

o   Venue data

- **Sources of data ad methods to extract them**:

- Web scraping Wikipedia

- Merging scraped data frame with latitude/longitude CSV file

- Using Foursquare credentials to call venues with a limit of 100 in the Toronto area

- Filtering and creating new data frames that include only data needed: neighborhood, venue category, latitude, longitude

- Use one hot encoder to receive binary values

- Cluster with k-means and sort based on cluster

- Visualize with folium to see clustered neighborhoods in Toronto to finalize the analysis.

- Results:

  o Neighborhoods were clustered into 3 categories:

  o   Cluster 0: 48 Red markers

  o   Cluster 1: 54 Purple markers

  o   Cluster 2: 1 Green Marker
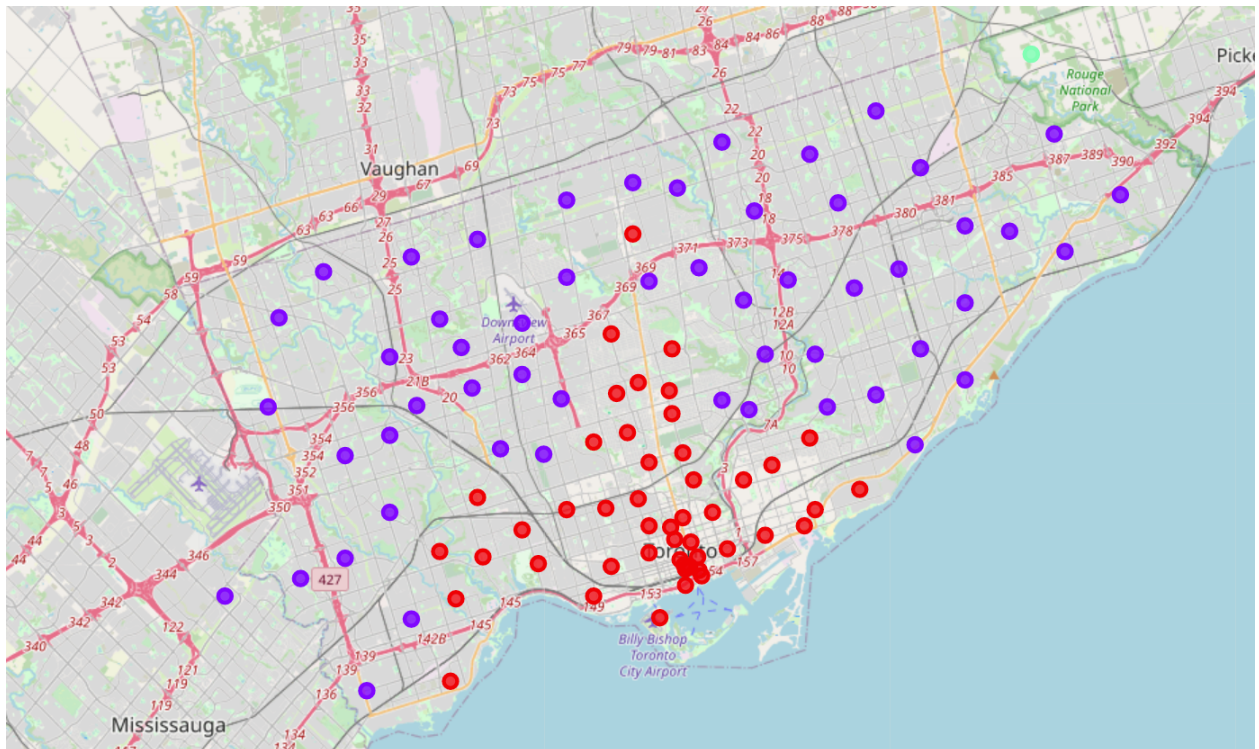
- Discussion

  • There was a large difference between cluster 2 compared to cluster 1 and 0.The

    downtown area being cluster 0 was more tightly packed then cluster 1. Cluster 2

    (green) was only 1 and further north than the other locations.

LIMITATIONS:

Limitations was in depth analysis in the venue categories, there could have been one more analysis done with respect to a different business question. For example: A restaurant owner wants to start a location in downtown neighborhood, what is the best neighborhood to do that in with respect to other luxurious restaurants in the area?

Conclusion:

Within our scope of the analysis the logical are to build a restaurant in the city of Toronto is cluster 1 (Purple markers). We wish good luck to any stakeholder that is viewing this information.