IBM Data Science Professional Certificate

Opening an Indian Restaurant in Calgary

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INTRODUCTION TO BUSINESS PROBLEM

- Calgary, is one of the Canadian cosmopolitan cities famous for its status as the centre of Canada's oil industry. It is a home for opportunities.

- The aim of this capstone project is to analyze the data of various neighborhoods in Calgary and determine best locations to set up a new business "Indian Restaurants".

- This project would assist the investors and stakeholders to determine their industry for future investments.

DATA SOURCES

1. Calgary Wikipedia :
https://en.wikipedia.org/wiki/Calgary

- This data is used in listing the existing neighborhoods.

2. Open data- City of Calgary :
https://data.calgary.ca/browse?tags=open+data

- This site is used in obtaining new neighborhoods and their communities.
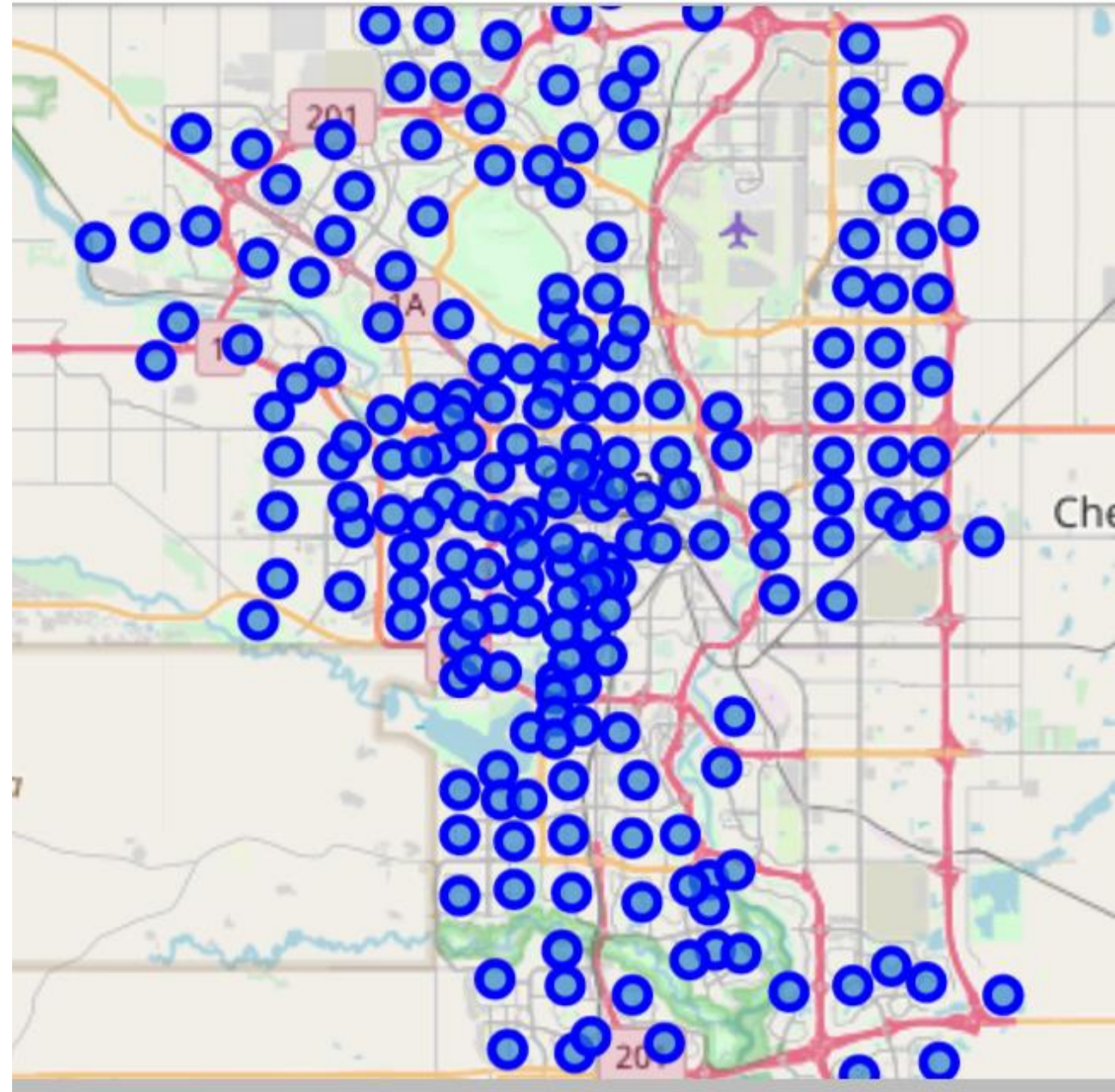
3. Foursquare API : https://foursquare.com/

- Foursquare API is used to obtain latitude, longitudes and venue data for the different neighborhoods
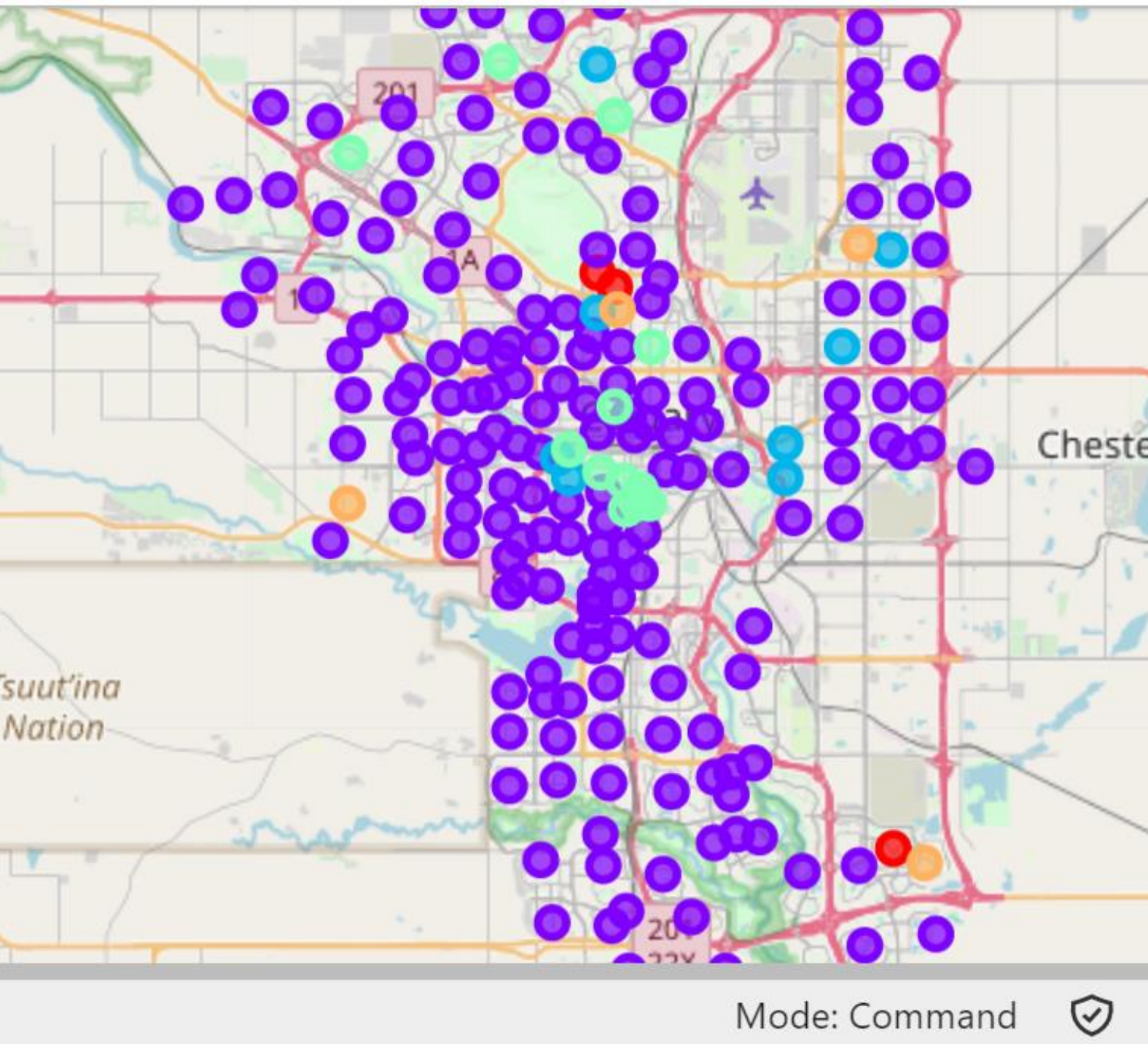
Exploring Data Set

Calgary dataset:

- The data frame has 8 sectors and 213 neighborhoods.

- Using Four Square API to obtain latitude, longitude and

venue information for Calgary

Mode: Command

CLEANING DATA

AND CREATING

NEW DATA FRAME

• Extracting venue data for all the neighborhoods of Calgary within a radius of 1000 and limit of 100.

• There are 260 unique categories of venues(businesses).

• Creating new data frame consisting of data related to Indian Restaurant in each neighborhood.

METHODOLOGY

- Clustering the neighborhoods in Calgary

- Run k-means to cluster the neighborhoods in Calgary into 5 clusters.

OBSERVATIONS

- Cluster 0 : This cluster 3 neighborhoods and has equal number of Indian restaurants.

- Cluster 1 : It can be observed that about 179 neighborhoods in Calgary don't have a signification number of Indian restaurants.
It is clear that starting a new Indian restaurant in these neighborhoods is a good options for new investors.

- Cluster 2 : This cluster 9 neighborhoods and has Indian restaurants.

- Cluster 3 : This cluster 12 neighborhoods and has Indian restaurants.

- Cluster 4 : This cluster 4 neighborhoods and Indian restaurants are present in these neighbourhoods.

RESULTS

❖ Neighborhoods in Calgary that can become a potential area to start new Indian Restaurants.

❖ Data shows that

- 40 neighborhoods in Central Calgary

- 25 in the West

- 8 in the East

- 16 in the North

- 38 in the South

- 9 southeast

- 23 northwest

- 18 northeast

for starting new Indian restaurant.

CONCLUSION & FUTURE DEVELOPMENTS

❖ Data shows that about 178 neighborhoods in Calgary have a potential to launch new Indian Restaurants and improve the economy.

❖ This dataset can be combined with dataset consisting of immigrant information, employment and transportation to make more specific assumptions.

THANK YOU