# **Analyzing suitable location to open Indian Restaurant in Toronto, Canada**

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**Introduction**

Various cuisines of restaurants are available in Canada Toronto. The idea behind this project is to find a suitable location to open an Indian restaurant. Various factors which come into play to make sure that a restaurant is successful may be as follows:

Are people interested in having food in restaurants?

Do people like the particular cuisine?

This particular project is to determine the value of opening a Indian Restaurant in Toronto area, to determine which area would be suitable, and which area will pull in crowd and more profitable. I have used the k-means clustering algorithm to identify the same, and used Foursquare services to get the venue details. Businesses which plan to open an Indian restaurant in this area would benefit from this study/report.

**Data**

The data being used for this project is the postal codes of Toronto, Canada from the Wikipedia page.

From this data we mainly wanted to identify the neighborhoods and their corresponding latitude and longitude.

Some data cleansing was done by deleting rows with no Boroughs assigned. Any Neighborhood with missing data was updated as same as Borough. Multiple Neighborhoods were linked together if they had the same postcode.

The data for latitude and longitude was fetched from the CSV file - <http://cocl.us/Geospatial_data>.

This data was then merged with the various postcodes and their Neighborhood and Borough details.

Getting the latitude and longitude details for the various postal codes and neighborhood, I used this to get the venue locations using the Foursquare location data.

**Exploratory Data Analysis**

The Foursquare API for venues was used to get the venue location for various shops and restaurants. In this we found that in all of Toronto areas, there are some 236 unique categories.

Next we found out how many Indian restaurants are there in each area.

Next we ran the K-Means clustering algorithm to identify clusters where there is more number of Indian restaurants. K was set to 3.

After identifying the clusters, we also tried to find where other similar cuisine restaurants are more. Based on that we concluded out report.

**Results**

Most Indian locations are in Cluster 2 which is around Riverdale, Central Bay Street area. Areas like Regent Park, The Junction South, Richmond do not have any Indian Restaurants. Church and Wellesley areas have very few Indian Restaurants.

**Discussion**

Regent Park area does not have any Indian Restaurants, but it has some Mexican and Italian restaurants. SO it might be a good opportunity to open a Indian Restaurant there, as there would be no competition, but you will have people who do like to eat out. Also Mexican and Indian food have some similar tastes, so would be a good opportunity to pull that crowd.

**Conclusion**

As per the report the suggestion would be to open Indian restaurant in Regent Park neighborhood of Toronto, Canada.