Opening a new Burmese Restaurant in Toronto

Introduction

I am creating a hypothetical scenario for a concept Burmese restaurateur who wants to explore opening an authentic Burmese restaurant in Toronto area. The idea behind this project is that there may not be enough Burmese restaurants in Toronto and it might present a great opportunity for this entrepreneur who is based in Canada. As Burmese food is very similar to other Asian cuisines, this entrepreneur is thinking of opening this restaurant in locations where Asian food is popular (aka many Asian restaurants in the neighborhood). With the purpose in mind, finding the location to open such a restaurant is one of the most important decisions for this entrepreneur and I am designing this project to help him find the most suitable location.

Data

To solve this problem, I will need below data:

- List of neighborhoods in Toronto, Canada.
- Latitude and Longitude of these neighborhoods.
- Venue data related to Asian restaurants. This will help us find the neighborhoods that are most suitable to open a Burmese restaurant

Extraction

- Scrapping of Toronto neighborhoods via Wikipedia
- Getting Latitude and Longitude data of these neighborhoods via Geocoder package
- Using Foursquare API to get venue data related to these neighborhoods

Results

The results from k-means clustering show that we can categorize Toronto neighborhoods into 3 clusters based on how many Thai restaurants are in each neighborhood:

- Cluster 0 (Red): Neighborhoods with little or no Thai restaurants
- Cluster 1 (Purple): Neighborhoods with no Thai restaurants
- Cluster 2 (Green): Neighborhoods with high number of Thai restaurants

Recommendations

Most of Thai restaurants are in Cluster 2 which is around Adelaide, King, Richmond areas and lowest (close to zero) in Cluster 1 areas which are North Toronto West and Parkdale areas.

Also, there are good opportunities to open near Chinatown, St James town as the competition seems to be low. Looking at nearby venues, it seems Cluster 1 might be a good location as there are not a lot of Asian restaurants in these areas. Therefore, this project recommends the entrepreneur to open an authentic Burmese restaurant in these locations with little to no competition. Nonetheless, if the food is authentic, affordable and good taste, I am confident that it will have great following everywhere

Conclusion

In this project, we have gone through the process of identifying the business problem, specifying the data required, extracting and preparing the data, performing the machine learning by utilizing k-means clustering and providing recommendation to the stakeholder.

References

List of neighborhoods in Toronto: https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M

Foursquare Developer Documentation: https://developer.foursquare.com/docs