IBM Capstone Project Report  
A place for a Chinese Mexican restaurant in Toronto

Introduction/Business Problem

I imagine working with a company offering business analysis to others. Our current client, Paul, is a person whose wish is to create his own Chinese/Mexican restaurant in Toronto. Yes it's quiet odd... He does not have a particular preference about the location of his future restaurant, but would like to have it placed in a strategic position, without any cost consideration at first. That is why he asked us to help him : finding the neighborhood in Toronto which is the most interesting considering both:

* Presence of potential clients
* Competition with similar restaurants

Data

To deal with this problem, I will be using the Foursquare location data. The idea is to make requests to get the venues in each of Toronto's neighborhoods. Then we will be able to work with them. In order to locate the neighborhoods and make Foursquare requests, I will first use the Wikipedia page listing these neighborhoods per postal codes. Then with this postal code I can find all the venues nearby thanks to Foursquare's API. This goes right into a dataframe, and I must repeat the process for all neighborhoods.

Methodology

The main steps of my analysis are the following:

* **Wikipedia scraping** to get the list of neighborhoods in Toronto
* **Pandas processing** to convert it into a dataframe
* **Mapping of the boroughs** to have a first look at the data, thanks to Foursquare and Folium
* **Extracting and exploring the dataset** to obtain a list of all venues for each neighborhood, with their coordinates and category
* **Counting the restaurants, Chinese and Mexican restaurants in each borough** to build our model: the more restaurants, the higher the score, because there is a demand for these venues. The more Mexican or Chinesei restaurants, the lower the score, because there is too much competition.
* **Final scoring and mapping** to order the neighborhoods by efficiency for the new restaurant and visualize them on a map

Results

Thanks to our analysis we narrowed all the possible locations for a new Chineses/Mexican restaurant to a few. The score attibuted to every neighborhood shows that 2 of them seem over the others, with a score over 18.6 or 20. These places are indeed rich in restaurants, and thus in clients, but do not have many Chinese restaurants yet, nether Mexican. If our client is not interested by these 2 locations for any reason (financial for instance), we are able to give him an ordered list of the most interesting neighborhoods to install his restaurant.

Une image contenant capture d’écran

Description générée automatiquement

Discussion

As said earlier, there are 3 neighborhoods that seem very interseting for our client. Namely :

* Little Portugal, Trinity
* The Danforth West, Riverdale
* Willowdale, Willowdale East

These locations aren't in the center of Toronto, we can guess that the renting price is low. page3image66378112Conclusion

We were able to find some locations that seem to be a good compromise between effectiveness

and cost.

We truly hope that our analysis will help Paul to find the perfect location for his restaurant.

Une image contenant texte, carte

Description générée automatiquement