



Good Location for a Pet Store

PROJECT FOR MRS. JU

1. Introduction

1.1 Background

As more and more people nowadays tend to keep themselves accompanied by some warm creatures, opening a pet store becomes a nice choice for newly coming investors.

1.2 Problem

In short, this project is for our customer Mrs. Ju. In view of her requirement, we focused on the info of Scarborough, Toronto. Our task is help her find a good place to open a pet store, and we have to satisfy her criteria.

2. Data Preparation

2.1 Data sources

The data we mainly used is the part of Scarborough neighborhoods, which we got from Wikipedia. We also make use of detailed information of venues and instruments there, which we attained with the help of Foursquare.

2.2 Data wrangling and feature selection

To explore the data, we use Foursquare-api to get the info of further details of each venues in those neighborhoods. Meanwhile we wrangle the data and drop those data which we are not interested in.

3. Data Exploration

During the later process, K-means clustering is what we use to perform machine learning. For that it could help us divide those neighborhoods into different clusters with their similarities.

3. Data Exploration

We also create a map for it, marking those clusters with different colors on the map. After such clustering, I could make it clear that which of them are suitable for our customer Mrs. Ju' s criteria, so that we could make proper decision for her.

4. Results

As the results shows, 12 of the neighborhoods are more focusing on bank and spa, which are not the most significant factors in our customer' s mind.

4. Results

Neighborhood Agincourt and Scarborough Village are of same problem. While Milliken, Agincourt North, Steeles East, L'... are more focused on park and Birch Cliff , Cliffside West are focused on cafeteria, bank and spa.

4. Results – features of different neighborhoods

	Neighborhood	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
12	Agincourt	0.0	Clothing Store	Bank	Spa	Supermarket	Park

	Neighborhood	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
5	Scarborough Village	2.0	Spa	Bank	Supermarket	Clothing Store	Park

4. Results - features of different neighborhoods

	Neighborhood	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
0	Malvern , Rouge	1.0	Bank	Spa	Supermarket	Clothing Store	Park
1	Rouge Hill , Port Union , Highland Creek	1.0	Bank	Spa	Supermarket	Clothing Store	Park
2	Guildwood , Morningside , West Hill	1.0	Bank	Spa	Supermarket	Clothing Store	Park
3	Woburn	1.0	Bank	Spa	Supermarket	Clothing Store	Park
4	Cedarbrae	1.0	Bank	Spa	Supermarket	Clothing Store	Park
6	Kennedy Park , Ionview , East Birchmount Park	1.0	Bank	Spa	Supermarket	Clothing Store	Park
7	Golden Mile , Clairlea , Oakridge	1.0	Bank	Spa	Supermarket	Clothing Store	Park
8	Cliffside , Cliffcrest , Scarborough Village West	1.0	Bank	Spa	Supermarket	Clothing Store	Park
10	Dorset Park , Wexford Heights , Scarborough To...	1.0	Bank	Spa	Supermarket	Clothing Store	Park
11	Wexford , Maryvale	1.0	Bank	Spa	Supermarket	Clothing Store	Park
13	Clarks Corners , Tam O'Shanter , Sullivan	1.0	Bank	Spa	Supermarket	Clothing Store	Park
15	Steeles West , L'Amoreaux West	1.0	Bank	Supermarket	Spa	Clothing Store	Park

4. Results – features of different neighborhoods

	Neighborhood	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
14	Milliken , Agincourt North , Steeles East , L'...	3.0	Park	Bank	Spa	Supermarket	Clothing Store

	Neighborhood	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
9	Birch Cliff , Cliffside West	4.0	Café	Bank	Spa	Supermarket	Clothing Store

5. Discussion

From the results, combining the requirements of our customer, we could make the decision that it would be better to locate at Milliken, Agincourt North, Steeles East, L'..., which perfectly match her criteria.

5. Discussion

However, in this whole process, we find that whatever the cluster is, the neighborhoods there are all equipped with banks. It seems not a factor we need to take into consideration for that it has covered the whole borough. We're not sure whether it has done side effects to our results.

6. Conclusion

In conclusion, it is a process of choosing location for a new pet store in Scarborough, Toronto, making use of machine learning skills. As my first task, it is not that good. I guess it could merely be defined as “pass” .

6. Conclusion

Dear classmate, thank you for your reading all of my report. It's an endpoint for our learning process in this course. But I believe it would also be a new start point for both of us. Carry on. Hope you would either achieve where you want to go.