

Finding the Right Location for Your Store

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1. Introduction

1.1 Background

A department store is a retail establishment offering a wide range of consumer goods in different product categories known as "departments". In modern major cities, the department store made a dramatic appearance in the middle of the 19th century, and permanently reshaped shopping habits, and the definition of service and luxury. It is a superstore carrying a wide range of products under one roof, and theoretically allows customers to satisfy all their shopping needs in one trip. Selecting the right location is the key element for attracting customers to any store. You can make more profit if you start a business that is in demand and you are able to attract the customers. Retail location considered to be one of the most important element in our retail marketing strategy, because it is a long-term decision associated with long-term capital. Once we have selected the location and started business, the decision cannot be changed easily without a loss. Therefore selecting the location for your store is a crucial decision every businessmen need to make. It is advantageous for retailers to suggest a right location for their business.

1.2 Problem

ABC is an UAE based retail corporation that operates a chain of hypermarkets and department stores . They are planning to expand their business to several other countries they decided start a store in Toronto, Canada. They need to find the right locations for starting their store in Toronto. While selecting location for a store we need to consider several factors like the transportation easiness, proximity to residential area, competitors nearby, the demographics, age groups, profession, income groups, life style, etc. We can use the Foursquare location data to find the informations like these.

As the first step, they decided to conduct a preliminary study on the location mainly to understand the if there is many competitors or not. The objective is to find whether there is a possibility for starting a retail department store in toronto or not.

2. Data Acquisition and Cleaning

2.1 Data Sources

We need to explore the city of Toronto.

1. As the neighborhood data is not readily available on the internet, I need to scrape the [Wikipedia](#) page (List of postal codes of Canada: M). After wrangling the data, built a dataframe of the postal code of each neighborhood, borough name and neighborhood name.
2. To solve the problem we can get data from Foursquare to get the latitude and longitude of the popular department stores in Toronto. . I used Foursquare data for this.

2.2 Data Cleaning

There were some missing values in the data scraped from Wikipedia. I removed the observations with missing values. After cleaning the data the dataframe had 11 boroughs and 103 neighborhoods.

3. Methodology

3. 1 Exploratory Data Analysis

I used IBM Watson Studio and Github repository while doing this project.

The scraped data, converted to a dataframe. The first few rows of the table look like this:

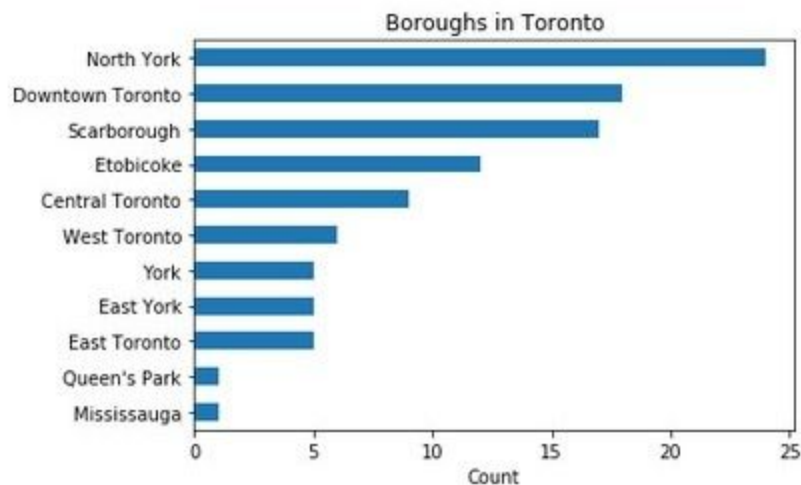
	Postcode	Borough	Neighborhood
0	M3A	North York	Parkwoods
1	M4A	North York	Victoria Village
2	M5A	Downtown Toronto	Harbourfront,Regent Park
3	M6A	North York	Lawrence Heights,Lawrence Manor
4	M7A	Queen's Park	Queen's Park

I loaded a dataframe of geospatial data which include Postcode, Latitude and Longitude values. The first few rows of the dataframe is given:

	Postcode	Latitude	Longitude
0	M1B	43.806686	-79.194353
1	M1C	43.784535	-79.160497
2	M1E	43.763573	-79.188711
3	M1G	43.770992	-79.216917
4	M1H	43.773136	-79.239476

The main components of the data were Borough, Latitude and Longitude informations of the city as well as the retail stores in Toronto.

The common key in both the dataset is Postcode. Therefore we merge these datasets. After cleaning the data the dataframe had 11 boroughs and 103 neighborhoods.



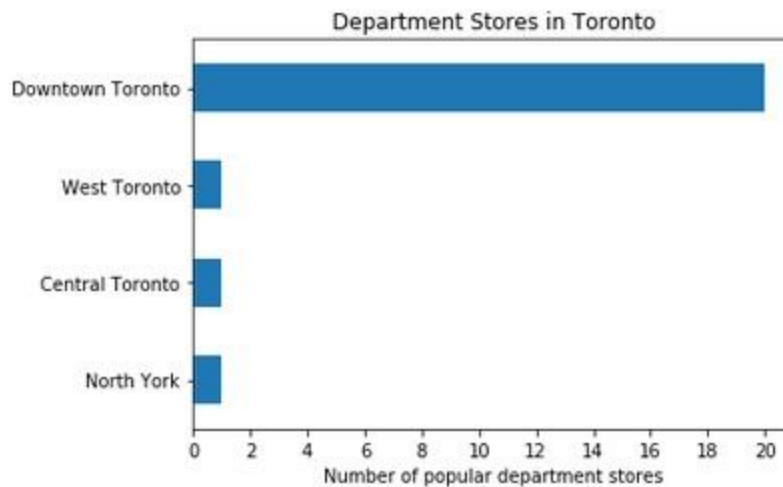
I used Python **folium** library to visualize geographic details of Toronto.

First I created a map of Toronto with neighborhoods superimposed on top. I used latitude and longitude values to visualize this.

Using foursquare, I collected the location details of department stores in Toronto and Mapped the data.

4. Results

Out of the 23 popular department stores selected, 86.96% of them were located at Downtown Toronto.



Therefore, the outcome of this preliminary analysis is there is enough rooms for ABC company to start their department store in Toronto, but may be not at Downtown Toronto.

5. Discussion

Even though the result is the company can start their retail store in Toronto, this is just a preliminary analysis, just about the competitors. There are several key elements we need to taken care of while finding a location for any retail store. We need to consider several factors like the transportation easiness, proximity to residential area, competitors nearby, the demographics, age groups, profession, income groups, life style, and many more.

The important point we need to consider here is while, searching for the departmental store data in foursquare we just searched using the keyword “Department store”. We cannot make sure that this include all the locations stored under other tags like, hypermarkets.

We removed the rows having missing values, It reduced the size of the data and we missed some information. There for this figures may not be the exactly as the count of department stores in Toronto. That's why we termed ‘*some popular department stores*’ in this project.

6. Conclusion

Based on this exploratory analysis, most of Toronto's department stores are located at Downtown Toronto. Therefore, in the preliminary analysis, a business owner can think of starting his retail department store in Toronto.

7. References

1. [List of hypermarkets](#)
2. [Department Store](#)
3. [Wikipedia](#)
4. [Housing Sales Prices & Venues Data Analysis of Istanbul](#)