

Identify business opportunities and competitor analysis in New York city

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1.0 Introduction and identify the problem

My relatives would like to open a coffee shop in New York City. However, she lack of knowledge about this industry. Therefore, this report is to help her understand more about the industry condition of New York City and competitor. Based on previous research, the interest by consumers in the premium coffee house industry is getting popular in recent years. The ideal premium coffee shop will provide a friendly, comfortable atmosphere where the customer can receive quality food, service and entertainment at a reasonable price. Besides that, the premium type coffee house will offer a variety of choices to the customers. Coffee and tea of all sorts will be offered. Juice, soda, and non-alcoholic beverages also will be available. Moreover, the location of premium coffee shop is one of the essential elements to be success in this industry. The reason behind is a strategic location can easily expose to huge traffic of people therefore enhance the probability of people to enter the shop and spend for a coffee. Therefore, this report would like to explore the business opportunity of coffee shop and strategic location in the area of New York City.

The objectives of this project as show below:

- Identify the coffee shop business opportunity in New york city
- Identify the competitor and analyze competitor movement
- Identify the suitable location for coffee shop business

2.0 Data

The data using for this project is the neighborhood data of New York City. The data was downloaded from the repository name New York City neighborhood name. The data had included a few information such as Neighborhood name, Latitude and Longitude. This report will use the data mentioned above to analysis the business condition within the area of New York City. Besides that, the data also used for identify the potential competitors and how they doing in this area.

3.0 Methodology

Foursquare is a social location service that allows users to explore the world around them. It allow the user to check in at specific place and share to social network. When a user checks in enough times, that user becomes the mayor of a location, which may or may not give the user access to special offers, depending on the business running a location. Therefore, this project is using the Foursquare API to communicate with Foursquare and get the various information such as business type, customer rating or comment and nearby venue within an area. Besides that, the methodology of this project is using the Jupyter notebook with python language. Moreover, python library such as pandas to structure the data while folium is to visualize the data in the map.

4.0 Result

Based on the result shown, there are 47 shops in the area. Below is the result.

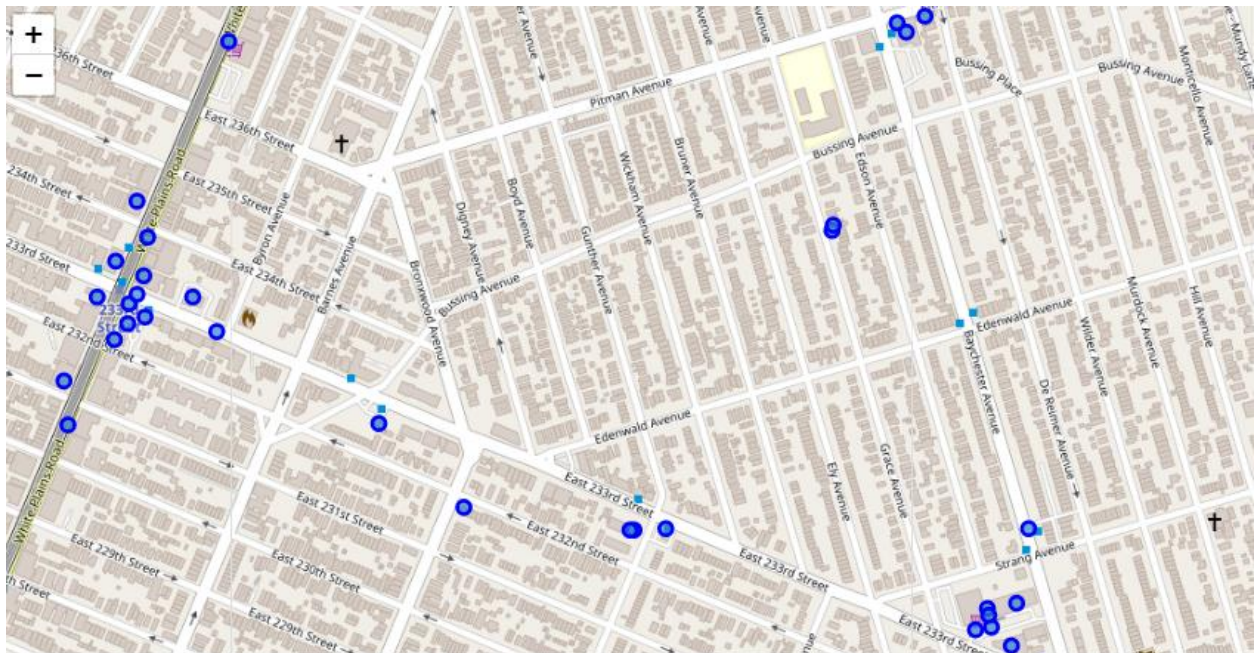
```
[11]:
```

	name	categories	lat	lng
0	Lollipops Gelato	Dessert Shop	40.894123	-73.845892
1	Ripe Kitchen & Bar	Caribbean Restaurant	40.898152	-73.838875
2	Ali's Roti Shop	Caribbean Restaurant	40.894036	-73.856935
3	Jackie's West Indian Bakery	Caribbean Restaurant	40.889283	-73.843310
4	Carvel Ice Cream	Ice Cream Shop	40.890487	-73.848568

```
[12]: nearby_venues.shape[0]
```

```
[12]: 47
```

Then, I had visualized the data as a map by using folium library. The results show the shops are quite concentrated in few places. Below is the result.



Then, I checked got how many coffee shop in the city in order to identify the competitors. However, the results showed there is no coffee shop in the city. Below is the result.

```
[14]: (nearby_venues.categories == 'Coffee Shop').sum()
```

```
[14]: 0
```

Since there is no any direct competitor in the city, therefore, I shift the analysis target to other indirect competitor such as dessert shop. In my opinion, dessert is a substitute of the coffee when during tea time. As a result, people tend to consumer either one product to continue the rest of the day. Besides that, my relatives would like to sell some pastry in the shop as well. Therefore, it would have the direct competition to who sell the similar range of products. Based on the result, there is only one shop is categories as dessert shop. Below is the result

```
[15]: (nearby_venues.categories == 'Dessert Shop').sum()
```

```
[15]: 1
```

Then, I further analysis the Dessert shop by using Foursquare API tool. I tried to obtained the shop rating but there is no any rating to the shop. Below is the result

```
[17]: venue_id = '4c537892fd2ea593cb077a28'
url = 'https://api.foursquare.com/v2/venues/{}?client_id={}&client_secret={}&v={}'.format(venue_id, CLIENT_ID, CLIENT_SECRET, VERSION)

try:
    print(result['response']['venue']['rating'])
except:
    print('This venue has not been rated yet.')

This venue has not been rated yet.
```

After that, I tried to get the comment from Foursquare's user to the Dessert shop. The result shows there are 3 agree and 0 disagree. The comment of user is positive as well. Below is the result.

	text	agreeCount	disagreeCount	id	user.firstName	user.lastName	user.id
0	Oh my word!! I travel 10s of miles for their flavors. Rum Raisin is a classic favorite and yes it has the rum ;-)	3	0	51d0ebe1498e66d541ccf58f	Nicole	P	18921156

Moreover, I further checked whether there are any trending venues nearby the dessert shop. The result show there is no any trending venues nearby the dessert shop. Below is the result.

```
[23]: if len(results2['response']['venues']) == 0:
    trending_venues_df = 'No trending venues are available at the moment!'
else:
    trending_venues = results2['response']['venues']
    trending_venues_df = json_normalize(trending_venues)

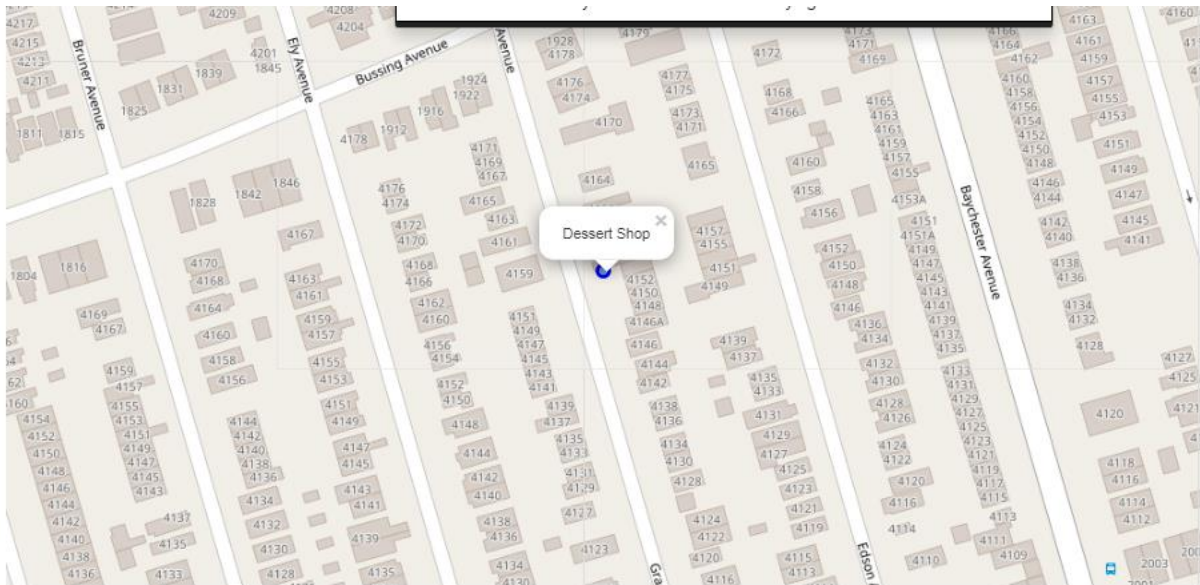
    columns_filtered = ['name', 'categories'] + ['location.distance', 'location.city', 'location.postalCode', 'location.state', 'location.
    trending_venues_df = trending_venues_df.loc[:, columns_filtered]

    trending_venues_df['categories'] = trending_venues_df.apply(get_category_type, axis=1)

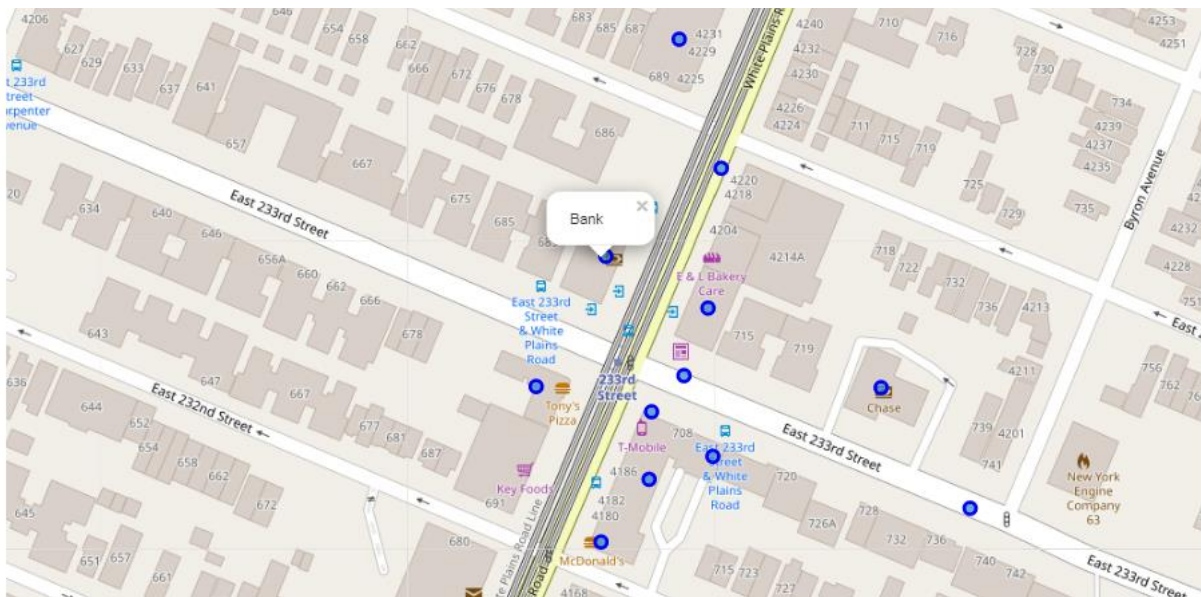
[24]: trending_venues_df

[24]: 'No trending venues are available at the moment!'
```

Then, I checked the surrounding of the dessert shop by using the folium library. The result shows the location of the shop is not located in the business area such as surrounded by Bank, School and Office. Basically, the nearest shop is only Gas station. Therefore, it might be the reason there is not any trending venue nearby. Below is the result



Lastly, I analyzed which area will have more business activities and I found the surrounding of bank have more business area. Below is the result



5.0 Discussion of result

Based on the result show, there is no any coffee shop in this area. However, there is other indirect competitor such as dessert shop in this area. The result show dessert shop has no any rating which is difficult to judge the popularity of this indirect competitor in this area. However, they still have some strength which they are having some positive comment which indicates the product is still acceptable by the consumer. The weakness of the dessert shop is the location. The shop is not located nearby the trending venue or business area which may result them loss of traffic of people. This problem also reflects in the customer comment which the customer needs to travel 10s of mile even they willing to do so. Moreover, open coffee shop surround nearby the bank would be a better choice due to surrounding of bank has many business activities and shop.

6.0 Recommendation

Based on the result shown, there will be low risk to open a coffee shop in the area. The reason behind is there did not have any direct competitor which is coffee shop. Instead, opening the coffee shop, it will give a new thing to let the neighborhood to experience. About the indirect competitor, there have their strength and weakness as well. The strength would be the product while the weakness is location. The location is important even the product is excellent. It is because, the product need a place or location to expose to public. A good business should enhance in both element which is product and location Therefore, I would like to suggest the coffee shop should open in the business area or near any trending venue. It will help to exposure to the high traffic of people and attract people with excellent product. The ideal location of coffee shop should be located nearby the banks which there are having a lot more business opportunities.

7.0 Conclusion

In this report, I had identified the potential business opportunities and found coffee shop has some potential market in this area. First, it is because there is not any direct competitor surround the area. Second, the indirect competitor such as dessert shop have some weakness which it is an opportunities to defeat them. After went through analysis, I had given some recommendation based on the observation.