

Where is the best place to launch a Bar in Manhattan

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Introduction - Background

The City of New York is the most populous city in the United States. It is diverse and is the financial capital of the USA. It is multicultural. It provides a lot of business opportunities and a business-friendly environment. It has attracted many different players into the market. It is a global hub of business and commerce. The city is a major center for banking and finance, retailing, world trade, transportation, tourism, real estate, new media, traditional media, advertising, legal services, accountancy, insurance, theater, fashion, and the arts in the United States. This also means that the market is highly competitive. As it is a highly developed city so the cost of doing business is also one of the highest. Thus, any new business venture or expansion needs to be analyzed carefully. The insights derived from the analysis will give a good understanding of the business environment which helps in strategically targeting the market. This will help in the reduction of risk. And the Return on Investment will be reasonable.



Introduction - Business Target

New York is an international metropolis with all kinds of people, and people also have various preferences. The bar is an important sign that reflects the citizens' preferences. Different Bars in New York can reflect the preferences of New Yorkers.

Timely change is a sign of a metropolis and an attribute preferred by citizens. In the face of the citizens' flexible preferences, it is a very commercial direction. By analyzing the preferences of citizens through the existing data, we can dig out the guidelines and suggestions for establishing a new Bar, so as to discover new business opportunities.



Introduction - Client's Goals

The client wants to open in the Manhattan area, so I only focused on the administrative area during the analysis. The purpose is to determine and recommend to management which community in New York City will be the best choice for opening a restaurant. Management also wants to understand the reasons for the recommendations.

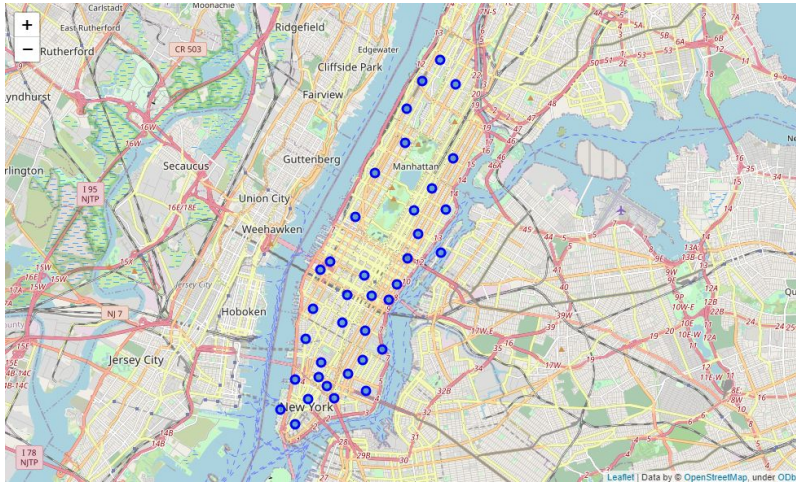


Data Collections and Map selections

	Borough	Neighborhood	Latitude	Longitude
0	Manhattan	Marble Hill	40.876551	-73.910660
1	Manhattan	Chinatown	40.715618	-73.994279
2	Manhattan	Washington Heights	40.851903	-73.936900
3	Manhattan	Inwood	40.867684	-73.921210
4	Manhattan	Hamilton Heights	40.823604	-73.949688

Through the map data document of New York City from the link of the resources: https://cocl.us/new_york_dataset, we create the table of neighborhood and borough with the location information as figure 1. Considering the demand from our clients, the opportunities for bars only in Manhattan, we only leave the neighborhoods under Manhattan

Initial Map for Neighborhoods



From Map, it's easy to find that the density of the neighborhood is higher in Lower Manhattan compared with other areas. Where the center of New York City attracts a lot of customers and travelers to enjoy their times at several kinds of bars. For the prior analysis, this will be a great place to launch the new version of bars to provide creative products with new elements for the youngs, and customers prefer the novelties.



Map of Bars in Manhattan

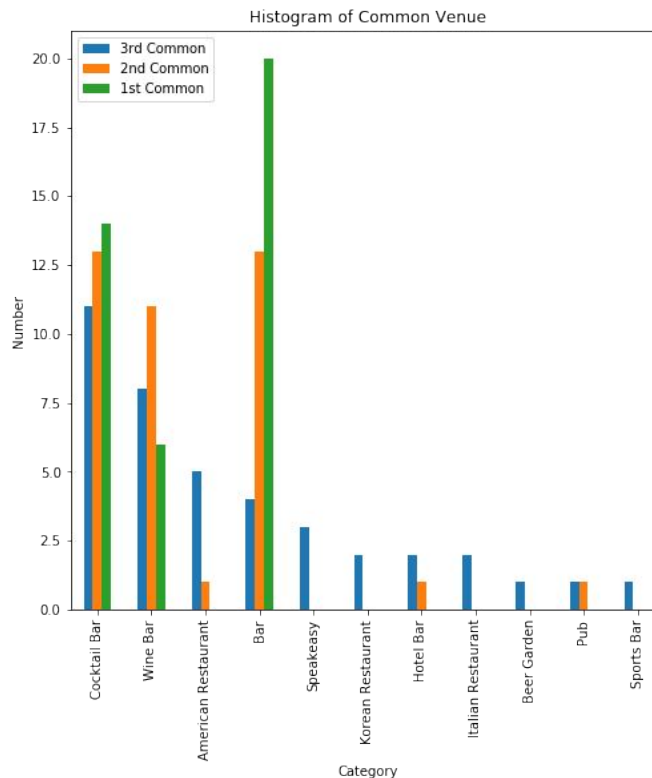
Figure out all of the existing bars (1780 bars) in Manhattan to find out the clustered segments of customers' performance and point out the red markers on Map



Analyze each Neighborhood

In this part, we will try to find the average choices for each neighborhood in Manhattan in a total of 86 special kinds of restaurants in the type of Bar. After summarising the total neighborhoods, we select the top 10 common venues for each one.

From the histogram figure, the most common venue focuses on the 3 categories including bar, Wine Bar, Cocktail Bar. Customers prefer the professional place for the wine and beer at the Bar in place of the restaurants in food.





Using K-means to find the cluster features

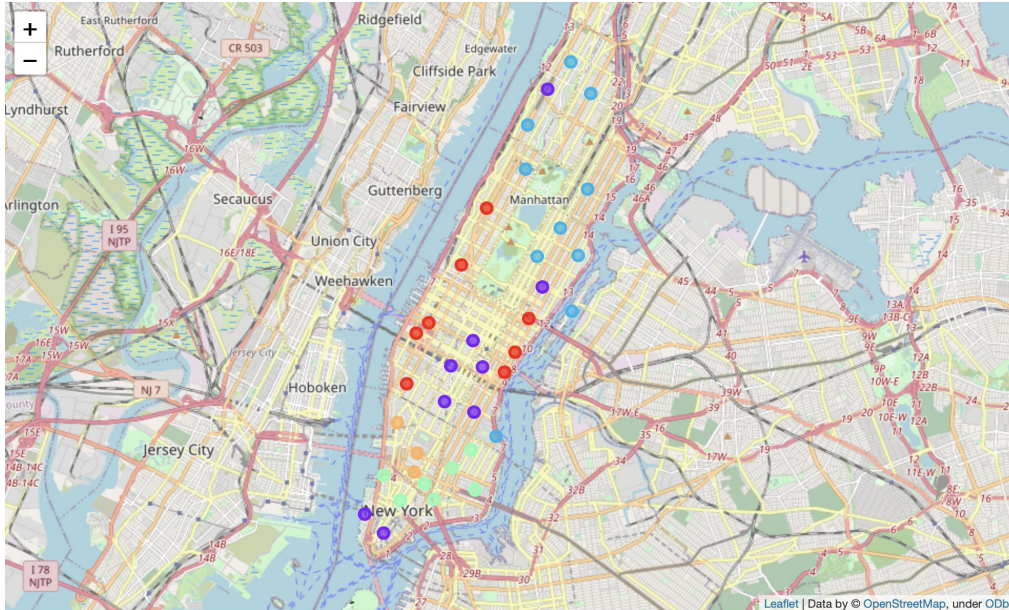
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# set number of clusters
kclusters = 5

manhattan_grouped_clustering = manhattan_grouped.drop('Neighborhood', 1)

# run k-means clustering
kmeans = KMeans(n_clusters=kclusters, random_state=0).fit(manhattan_grouped_clustering)

# check cluster labels generated for each row in the dataframe
kmeans.labels_[0:10]
```

Result of Clustered neighborhood



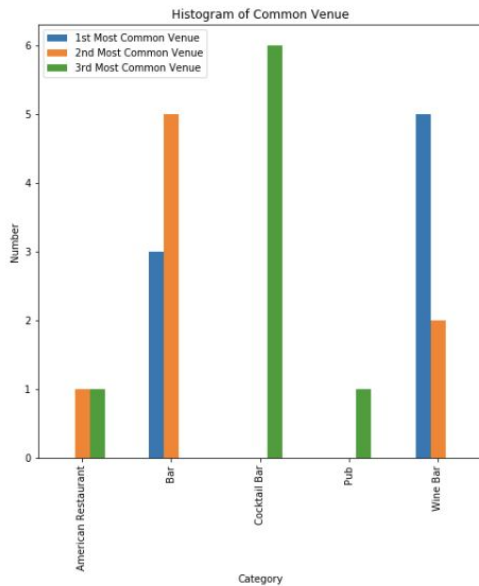
There are 5 clustered customers' performance and marked as 5 different kinds of markers on Map 3. Generally, most of the segments in purple locate in lower Manhattan and middle Manhattan. The green one only selects the location at the lower Manhattan.

Red = cluster0
Purple = cluster 1
Blue = cluster 2
Green = cluster 3
Yellow = cluster 4

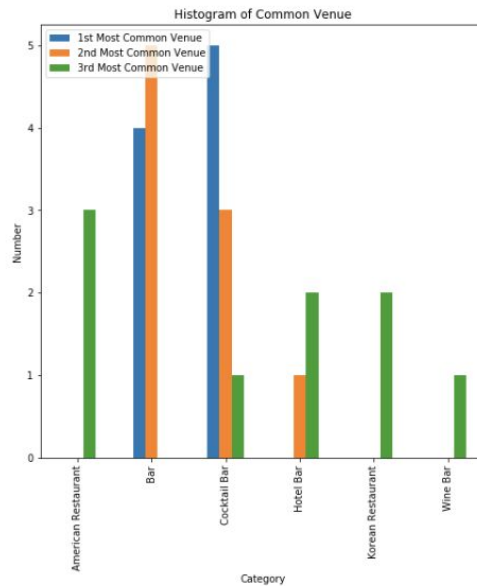


The histogram of each cluster

Cluster 0 = Red marker



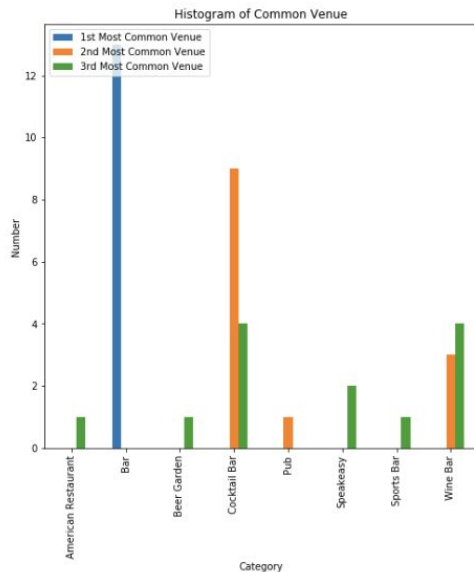
Cluster 1 = Purple marker



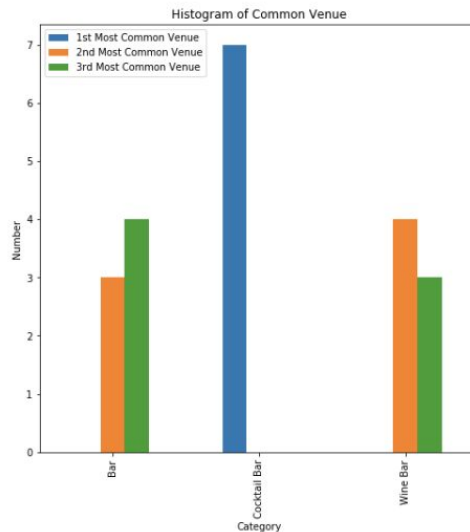


The histogram of each cluster

Cluster 2 = Blue marker



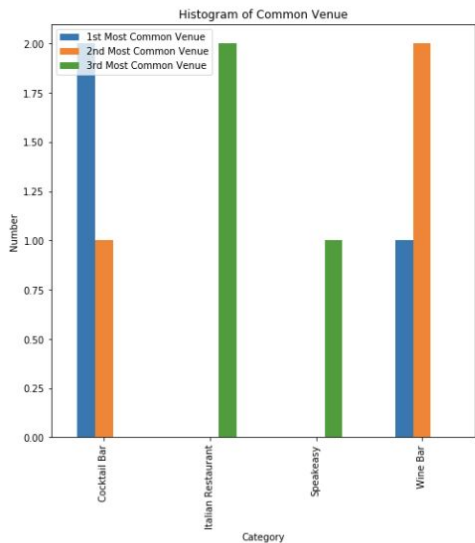
Cluster 3 = Green marker





The histogram of each cluster

Cluster 4 = Yellow marker



Cluster 4, 3, at the location in lower Manhattan would be the high-end bar offering only red wine and cocktails. Clearly the location with the highest rental fee and high pay customers.

Cluster 2, at the location in Upper Manhattan, would be the general bar to provide the beer and cheap wines.

Cluster 0, 1, at the location in middle Manhattan, would be the bars focus the beer and cocktail bar.



Conclusion

The location selection should be based on the type of bars our client would like to choose.

- As for the general bar, Upper Manhattan is a good choice, not only the density of the bar is not real high but also this kind of bar meets the demand of most customers at that place.
- As for the cocktail bar, middle Manhattan is a better place to launch.
- As for the high-end bar, providing the red wine, and cocktail should launch at the lower Manhattan.

Thank you!

