

# Best place in Manhattan to set-up a food joint/restaurant

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# Introduction

## Background

- Abeledata Inc., a client wants to extend its food-joint/restaurant business to other cities in the Manhattan, NY.
- As such she plans to open one of her restaurant businesses in a neighborhood in Manhattan, NY.
- However, there is a problem! Though NY is densely populated, she would still need to know where she can attract more customers. -Said differently, as a profit making business Abeledata would want to open the food-joint/restaurant business in particular location that will ensure she attracts a large pool of customers and subsequently make good sales.

## Goal

To determine where Abeledata Inc should locate or position their business in order to achieve her profit-making goal.

Data was used from the following sources

- From Foursquare API, we used data on venues of the food joints, shops, offices etc.
- From [https://geo.nyu.edu/catalog/nyu\\_2451\\_34572](https://geo.nyu.edu/catalog/nyu_2451_34572) we obtained data on neighborhoods in NY including their latitude and longitude coordinates.

- For each vicinity in Manhattan we counted the number of offices, shops & services and food joints using the venue data from Foursquare.
- We thought these venue data might be good indicators of opening restaurant or any food joint.
- Since some indicators have more importance than others, we assigned weights to these categories. Again we thought that employees in offices will make good customers and so the office category is a better indicator compared to shops & services in the area.
- A negative weight was assigned to the food joint group as this negatively affects our client's profit-making goal, positive weights to the shop & service group and office group as they make good customers; but a higher weight to the office group.

# Results

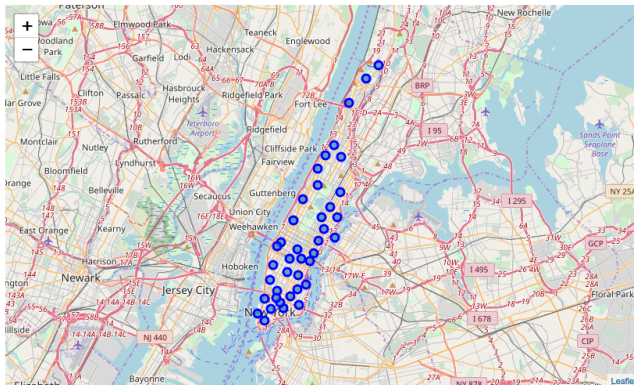


Figure 1: Manhattan Neighborhood with the blue circles representing the towns in the vicinity

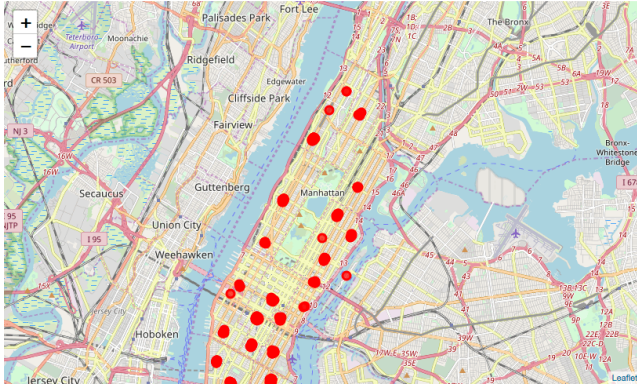


Figure 2: Manhattan Neighborhood with the red circles showing the food joints with 50 m radius in the vicinity

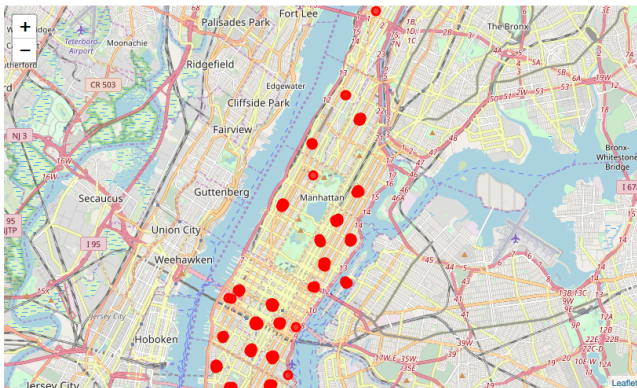


Figure 3: Manhattan Neighborhood with the red circles showing the shops & service centers within 50 m radius in the vicinity

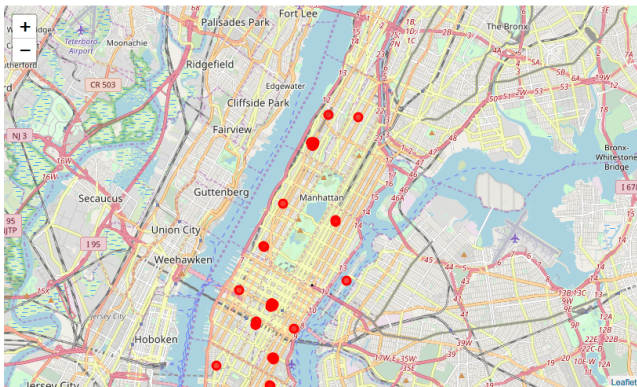


Figure 4: Manhattan Neighborhood with the red circles showing the offices within 50 m radius in the vicinity



Our team obtained a score for each neighborhood in Manhattan. The score was obtained this way:

- count the food joints, shops & services and offices in a particular neighborhood within a specified radius.
- Apply weights to each category and then add them up to obtain the score. A weight of -1 was applied to food joint group, weight of +1 was applied to shop & service group and lastly a weight of 2 applied to the office group.

We then ranked each of the neighborhoods in descending order based on the score. Below is the list of the top five neighborhoods.

| Neighborhood        | Score |
|---------------------|-------|
| Midtown             | 54    |
| Soho                | 46    |
| Morningside Heights | 42    |
| Flatiron            | 33    |
| Gramercy            | 24    |

|    | Borough   | Neighborhood       | Latitude  | Longitude  | Food Joints | Shops & Services | Office |
|----|-----------|--------------------|-----------|------------|-------------|------------------|--------|
| 0  | Manhattan | Marble Hill        | 40.876551 | -73.910660 | 0.0         | 0.0              | 0.0    |
| 1  | Manhattan | Chinatown          | 40.715618 | -73.994279 | 15.0        | 16.0             | 0.0    |
| 2  | Manhattan | Washington Heights | 40.851903 | -73.936900 | 0.0         | 1.0              | 0.0    |
| 3  | Manhattan | Inwood             | 40.867684 | -73.921210 | 23.0        | 25.0             | 0.0    |
| 4  | Manhattan | Hamilton Heights   | 40.823604 | -73.949688 | 2.0         | 2.0              | 0.0    |
| 5  | Manhattan | Manhattanville     | 40.816934 | -73.957385 | 1.0         | 0.0              | 1.0    |
| 6  | Manhattan | Central Harlem     | 40.815976 | -73.943211 | 4.0         | 12.0             | 1.0    |
| 7  | Manhattan | East Harlem        | 40.792249 | -73.944182 | 5.0         | 17.0             | 0.0    |
| 8  | Manhattan | Upper East Side    | 40.775639 | -73.960508 | 1.0         | 6.0              | 0.0    |
| 9  | Manhattan | Yorkville          | 40.775930 | -73.947118 | 7.0         | 13.0             | 0.0    |
| 10 | Manhattan | Lenox Hill         | 40.768113 | -73.958860 | 12.0        | 19.0             | 0.0    |
| 11 | Manhattan | Roosevelt Island   | 40.762160 | -73.949168 | 1.0         | 7.0              | 1.0    |
| 12 | Manhattan | Upper West Side    | 40.787658 | -73.977059 | 12.0        | 26.0             | 1.0    |
| 13 | Manhattan | Lincoln Square     | 40.773529 | -73.985338 | 4.0         | 0.0              | 2.0    |
| 14 | Manhattan | Clinton            | 40.759101 | -73.996119 | 5.0         | 7.0              | 1.0    |
| 15 | Manhattan | Midtown            | 40.754691 | -73.981669 | 11.0        | 25.0             | 20.0   |
| 16 | Manhattan | Murray Hill        | 40.748303 | -73.978332 | 5.0         | 6.0              | 0.0    |
| 17 | Manhattan | Chelsea            | 40.744035 | -74.003116 | 9.0         | 8.0              | 0.0    |
| 18 | Manhattan | Greenwich Village  | 40.726933 | -73.999914 | 18.0        | 29.0             | 0.0    |
| 19 | Manhattan | East Village       | 40.727847 | -73.982226 | 22.0        | 20.0             | 2.0    |
| 20 | Manhattan | Lower East Side    | 40.717807 | -73.980890 | 0.0         | 1.0              | 0.0    |
| 21 | Manhattan | Tribeca            | 40.721522 | -74.010683 | 1.0         | 5.0              | 0.0    |
| 22 | Manhattan | Little Italy       | 40.719324 | -73.997305 | 46.0        | 37.0             | 2.0    |

Figure 5: Each vicinity and the counts for each type categories investigated

## Conclusion

The best place for the food joint or restaurant is in **Midtown** of Manhattan!



Figure 6: Each vicinity and the counts for each type categories investigated

# Recommendation

- Future work will focus on a much more appropriate way to assign weights. As one can tell that weights suggested are subjective.
- We will consider including more categories in addition to the three categories used here.