

Best place for Italian restaurant in Manhattan

1. Introduction

The purpose of this Project is to help potential new restaurant owners to find the best possible place to open a new Italian restaurant in the Manhattan area.

This project aims to create a clear picture which neighbourhood would be the best for the restaurant. In this project we will take into account the number of existing restaurants in neighbourhoods and population count.

2. Data

Based on definition of our problem, factors that will influence decision are:

- Number of existing restaurants in the neighborhood (any type of restaurant and especially italian restaurants)
- Neighborhood names
- Neighborhood Latitude
- Neighborhood Longitude
- Venue Latitude
- Venue Longitude
- Venue Category
- Population Count

Following data sources will be needed to extract/generate the required information:

- Number of restaurants and their type and location in every neighborhood will be obtained using **Foursquare API**
- Coordinate of neighbourhoods will be obtained using **Geocoder**
- Population count of neighborhoods is obtained from **WorldAtlas web page**

3. Exploratory Data Analysis

First we need to locate all the neighbourhoods in Manhattan. There are overall 80 neighborhoods in Manhattan. In this we used a folium to draw a map of Manhattan with markers of each neighbourhood (picture 1.)



Picture 1. A map of Manhattan

There are a total of 6374 venues in Manhattan, that are found via Foursquare API. There are a total of 246 Italian restaurants in Manhattan. In Manhattan there are 7 neighbourhoods that have only two Italian restaurants (table 1.).

	Neighborhood	Italian restaurant
0	Battery Park City	2
1	Chinatown	2
2	Washington Heights	2
3	Midtown South	2
4	Hamilton Heights	2
5	Manhattan Valley	2
6	Lower East Side	2

Table 1.

The most populated neighbourhood is Midtown. Top 10 most populated neighbourhoods can be found in table 2.

Rank	Neighborhood	Population
1	Midtown	391371
2	Lower Manhattan	382654
3	Harlem	335109
4	Upper East Side	229688
5	Upper West Side	209084
6	Washington Heights	158318
7	East Harlem	115921
8	Chinatown	100000
9	Lower East Village	72957
10	Alphabet City	63347

Table 2.

3.1 Conclusion

In our analysis there are 2 winners. **Midtown** and **Washington heights** would be my guesses for opening a new restaurant. It would totally depend on vacant locations but I would start looking for those places. Chinatown is also a potential candidate, but who is going to start looking Italian restaurant in Chinatown?

3.2 Further steps

Next steps would be to take a look what kind of rent we are talking about in these locations, and who would be the potential customers in new restaurant.