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# VENEZUELAN RESTAURANT

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In New York



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IBM/Coursera Capstone Project – The Battle of Neighborhoods (Week 2)

## Introduction

Due to the economic, political, and social issues Venezuela is currently facing; New York has seen an increased influx of Venezuelans during the last decade. This results in an increased demand for Venezuelan restaurants. The purpose of this project is to explore the best locations in New York City for Venezuelan Restaurants. Potentially helping future Venezuelan restaurant owners experience great success and consistent profit.

Because opening a restaurant requires a tremendous amount of research and a deep look into a wide variety of variables; our focus will be the location itself. We will answer one particular questions, and that would be Where should the future restaurant owner open its Venezuelan restaurant?

## Data Description

### Data Needed

To solve this question, we would need the following information

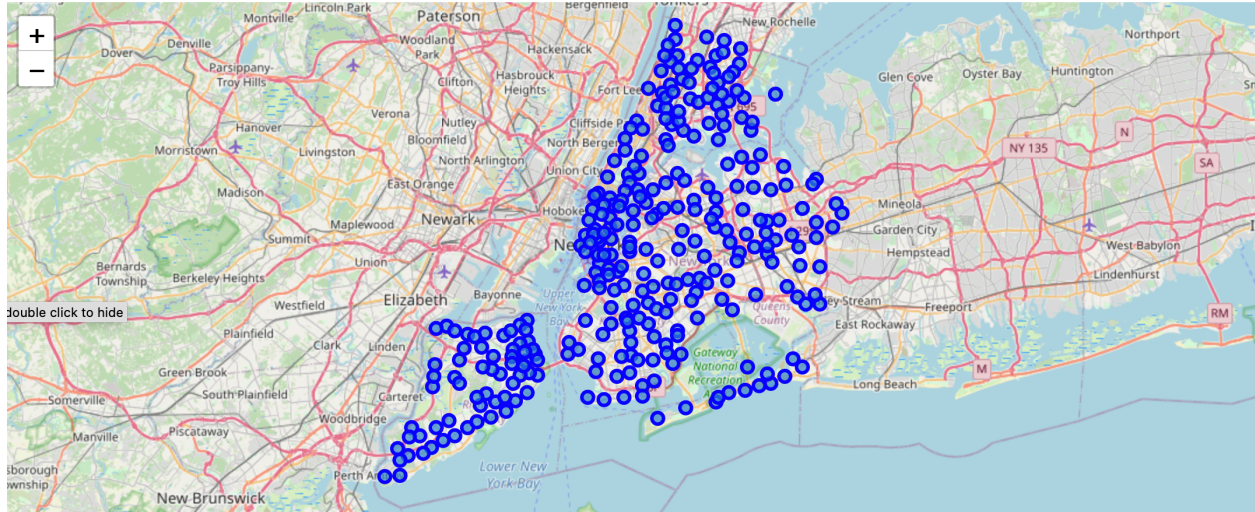
- New York City Data containing the neighborhoods and boroughs
- Coordinates (Latitude and Longitude) of these neighborhoods. To plot the data into a map and obtain venue data
- Obtain venue data from Foursquare API related to restaurants to determine best locations for a Venezuelan Restaurant.

## Methodology

Before we get the data and start exploring it, let's download all the dependencies that we will need. We then proceed to obtain the data of New York boroughs and neighborhoods. New York has a total of 5 boroughs and 306 neighborhoods. In order to segment the neighborhoods and explore them, we will essentially need a dataset that contains the 5 boroughs and the neighborhoods that exist in each borough as well as the latitude and longitude coordinates of each neighborhood.

After loading the data into a Pandas data frame, we proceed to explore the data. The first step in the exploration process, is to obtain the longitude and latitude of New York City. The geographical coordinate of New York City is 40.7127281, -74.0060152.

After obtaining the coordinates, we go ahead and plot everything into a map, superimposing the neighborhoods on top.



Once we get a clear picture of what we are dealing with. We ahead and dig deeper into where it will be the best location to open a Venezuelan Restaurant in New York. To do this, we'll use the Foursquare API, to obtain the necessary data that will help us answer our questions.

First is necessary to connect to Foursquare API using our Client ID, our Client Secret, and our Access Token. Once the connection is finalized, we proceed to define the functions that we'll use later in our analysis. These functions are:

- Geo\_Location (address)
- Get\_Venues (lat, lng)
- Get\_Venue\_Details (venue id)
- Get\_New\_York\_Data

Using the function Get\_Venues we obtain all the restaurants in the area that categorized as "Venezuelan Restaurants". After obtaining the list of Venezuelan Restaurants, we go ahead and try to visualize the spread using a bar graph. The bar graph allows to easily compare the number of Venezuelan restaurants in each borough. We then do the same bar graph, but this time on neighborhoods instead.

After completing the visualization, we go ahead and obtain all the rankings of the restaurant. The purpose of this step is to understand in which specific boroughs and neighborhoods the best Venezuelan Restaurants are located. We obtain this information from the Foursquare API and then make sure we get into a Pandas data frame. As usual we then visualize the results into a bar chart and map out the results to give our recommendations.

## Results

From the start of the project, we know there are 5 boroughs and 306 neighborhoods in New York City. When doing further analysis using the Foursquare API, we noticed there aren't that many restaurants categorized as Venezuelan Restaurants. In fact, there are only 12 Venezuelan Restaurants across New York City. Out of those 12 restaurants, 11 are in the Bronx borough, and only one is in the Manhattan borough.

When looking at the ratings, it was interesting to see that the top 9 restaurants from those 12, have a rating of 8.3 stars.

## Discussion

Providing a recommendation of a location to open any restaurant takes a much deeper analysis and understanding of the area. A simple look at Foursquare, analyzing locations and ratings is only a start to a much longer process. In addition, the study provided has a lot of room to improve. For instance, Foursquare does not seem to provide a specific category for Venezuelan Restaurant. It is strange, that only 12 restaurants are in the category of "Venezuelan Restaurant". This would require a deeper analysis into Foursquare to determine what other categories could we consider for this analysis. Categories such as "Arepa Bar" or just "Venezuelan" could have been used for this analysis.

## Conclusion

In conclusion, we can determine that Bronx is the best area in New York to open a Venezuelan Restaurant. It is a borough that is familiar with the food and overall supports this cuisine by providing good enough ratings.

Manhattan on the other hand is a market with untapped potential. Only one Venezuelan Restaurant in the area. It could potentially mean that there is still plenty of room to obtain first come advantage. In other words, given that there are not that many Venezuelan Restaurants; people who want to try this cuisine would go to your restaurant. If they like the food, then we will come back as there are not any options around.