

# Madrid's Best Neighborhood for an American Restaurant

Jabari Bradley

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## 1. Introduction

### 1.1 Background

Madrid is the capital and most populous city in Spain. In the metropolitan area Madrid has around 3.3 million inhabitants and 6.5 million inhabitants in the entire province. For this report I will be focusing on the metropolitan area of Madrid. With the city's huge influence in politics, education, entertainment, environment, culture and arts, it is one of the world's major global cities.

### 1.2 Problem

As the diverse, political, economic and cultural center of Spain, Madrid can be an ideal place to open a new American restaurant to attract tourists and locals alike. With 21 districts and 131 wards or neighborhoods, the purpose of this project is to get an idea of which neighborhood would be the best location to open the restaurant. One would want to stay away from neighborhoods that already have American restaurants and neighborhoods that have a large number of restaurants.

### 1.3 Interest

Owners of an American style restaurant, or owners of any restaurant who may want to open a location in Madrid would be interested in this report. This report will display all the different types of venues in different neighborhoods in Madrid, so anyone looking for any type of information on central neighborhoods in Madrid may also find this report helpful.

## 2. Data

### 2.1

I used the Foursquare API to get information on the different types of venues in the central neighborhoods in Madrid. I also used a table of all of the districts and neighborhoods from Madrid's Wikipedia page.

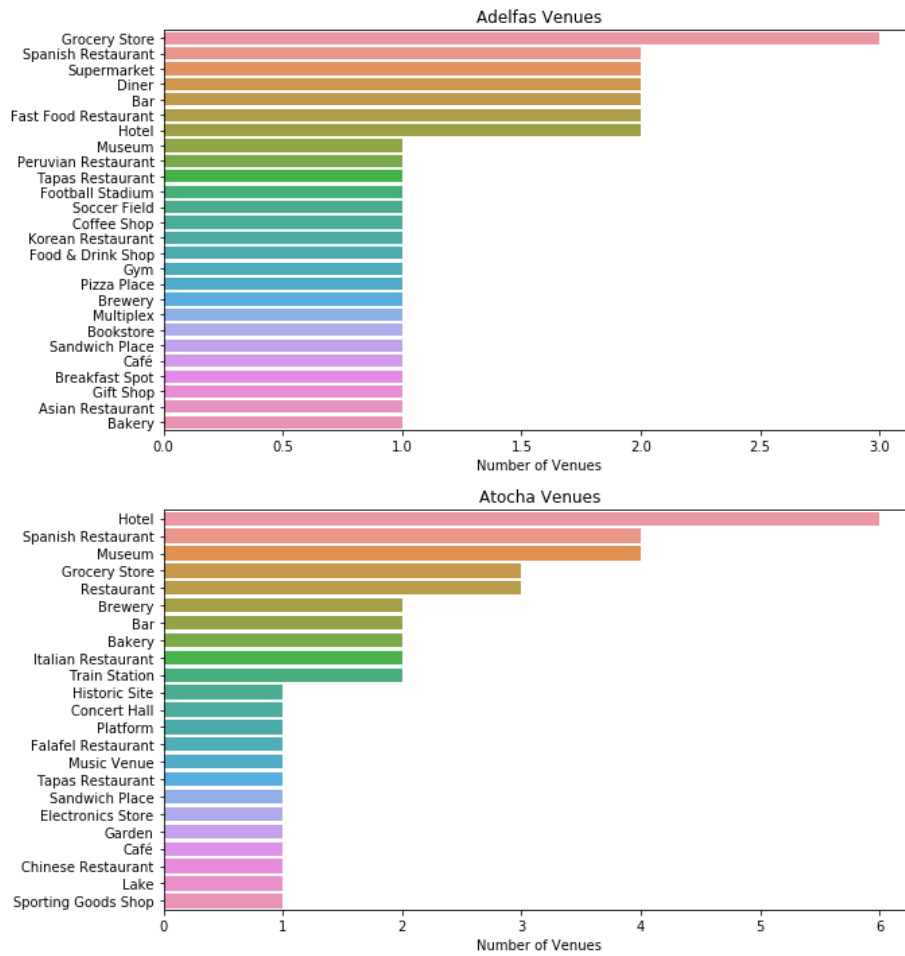
## 3. Methodology

### 3.1

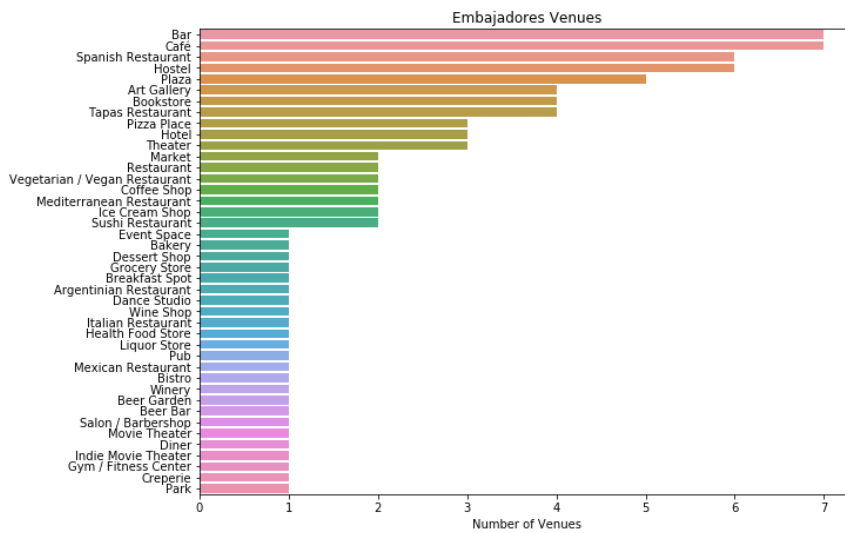
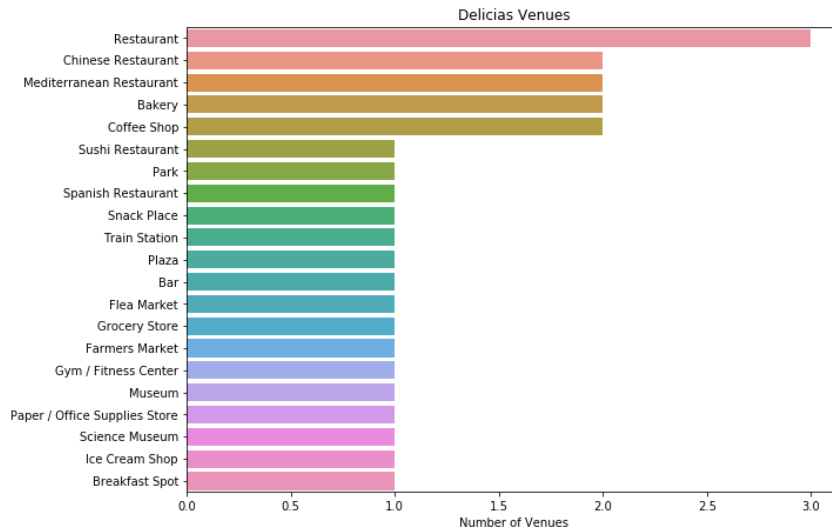
First, I used a table from a Wikipedia page with all of the districts and neighborhoods in Madrid, then transformed that table into a dataframe. As stated before, I decided to only focus on the metropolitan area which has the most central districts in Madrid. The 5 most central districts in the city are Centro, Arganzuela, Retiro, Salamanca and Chamberí. After creating a dataframe with the central districts and the neighborhoods within them, I obtained the latitude and longitude coordinates for each neighborhood using Python's geocoding client Geopy. With the latitude and longitude coordinates for each neighborhood, using Folium I created a map to show these neighborhoods and a function using the Foursquare API that returns a dataframe consisting of a sample of venues in a 500-meter radius of each central point in each neighborhood. I then created a new dataframe of 10 neighborhoods without typical American style venue types like "American Restaurant", "BBQ Joint", and "Burger Joint". Then I used Seaborn to create bargraphs representing each neighborhood that show the number of each type of venue in each neighborhood.

## 4. Results

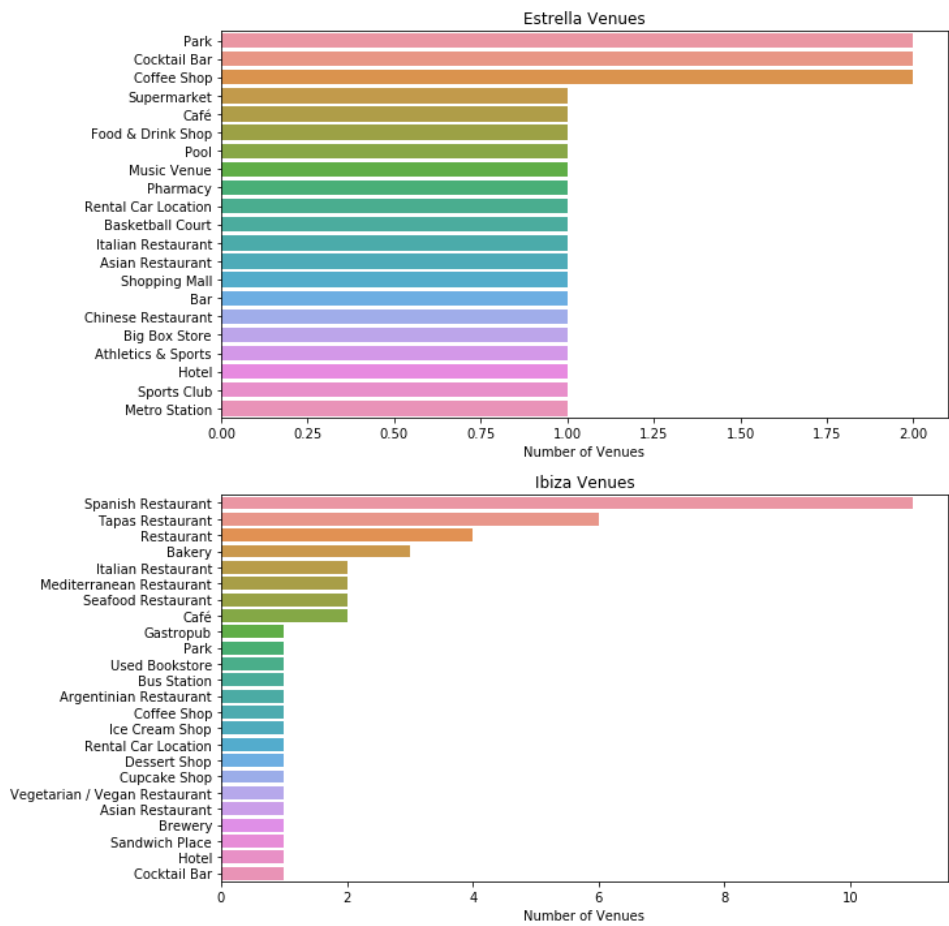
### 4.1 Adelfas: 11 Restaurant/Diners Atochas: 12 Restaurants



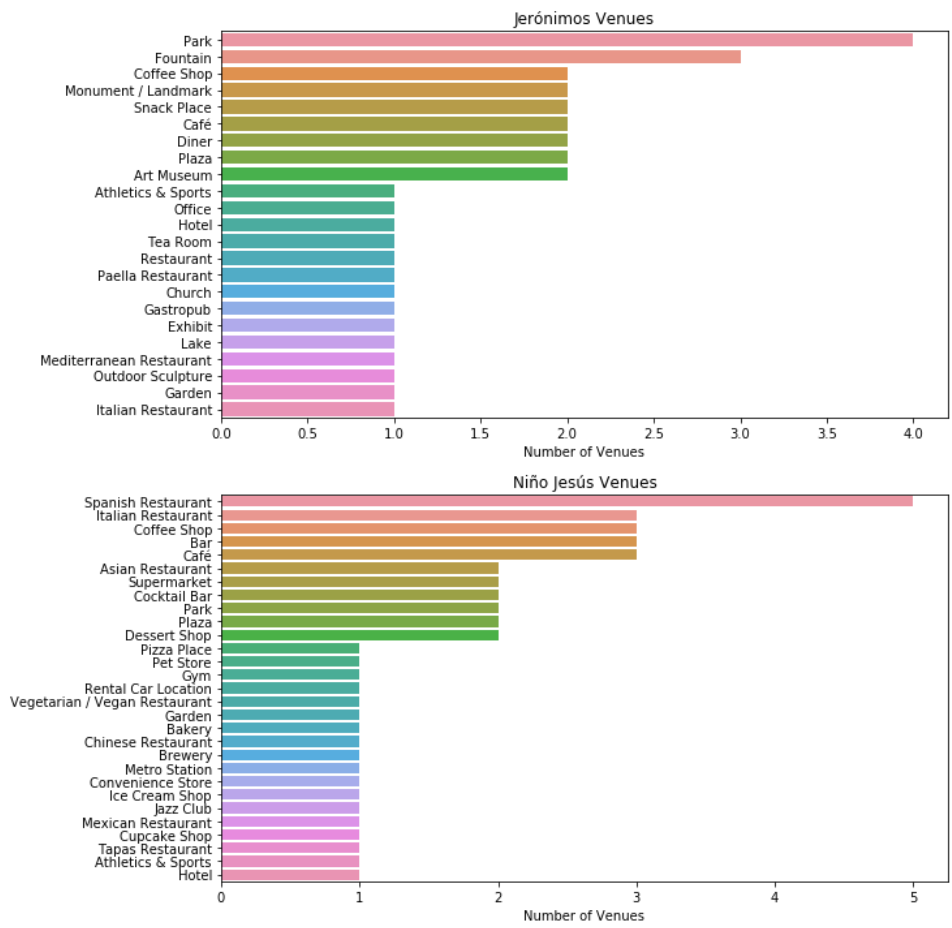
## 4.2 Delicias: 9 Restaurants Embajadores: 22 Restaurants



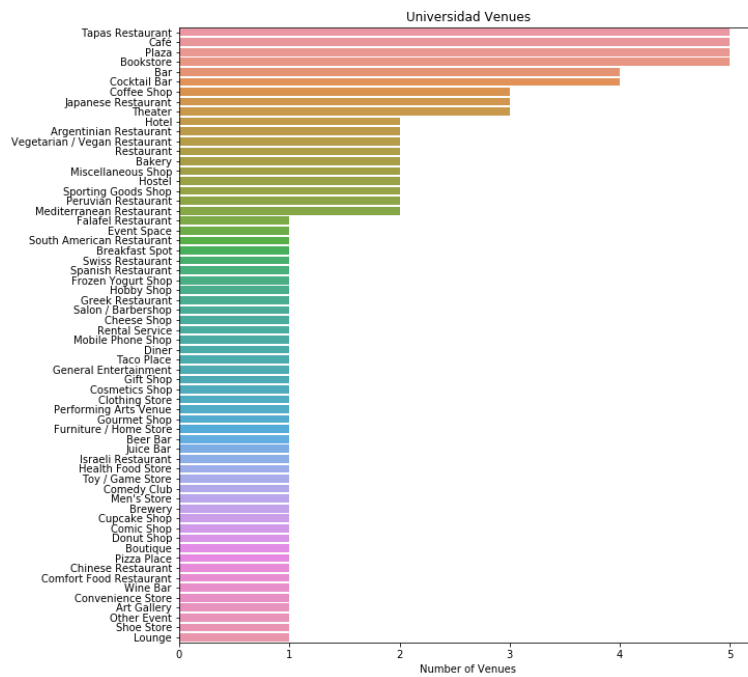
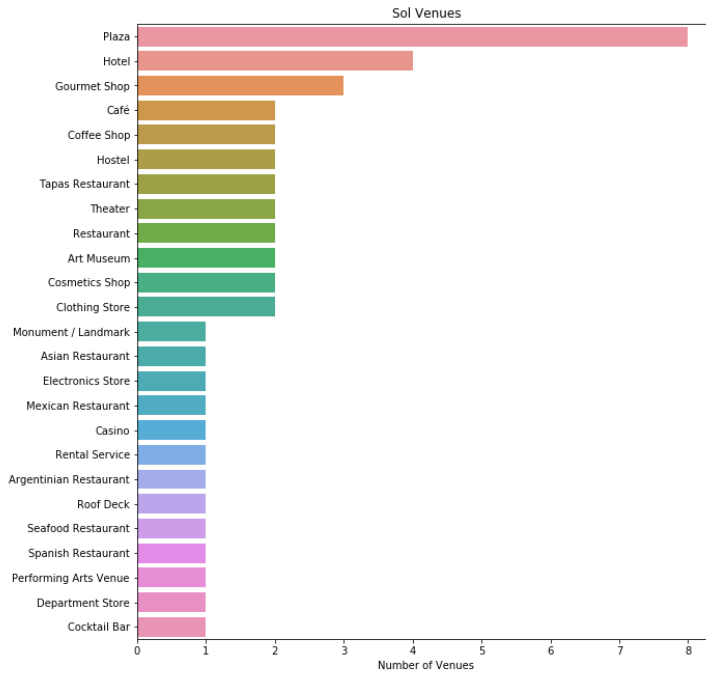
4.3 Estrella: 6 Restaurants Ibiza: 30 Restaurants



4.4 Jerónimos: 6 Restaurants Niño Jesus: 14 Restaurants



#### 4.5 Sol: 9 Restaurants Universidad: 30 Restaurants



## 5. Discussion

According to our data, Universidad, Ibiza, and Embajadores have the most restaurants with 30, 30, and 22 respectively. This is no surprise considering Universidad and Embajadores are located in the most central district: Centro. These neighborhoods are home to some of Madrid's most famous attractions like Plaza España, Plaza Mayor, and El Mercado de San Fernando. Centro is also home to some of Madrid's most famous and bustling areas like La Latina, Malasaña and Lavapiés. One observation that surprised me is the number of restaurants in Jerónimos. Jerónimos is just west of Madrid's most known park, Retiro Park. I would've guessed it had been a bustling neighborhood with plenty of restaurants like the neighborhood Embajadores just east of the park.

## 6. Conclusion

The purpose of this project was to get an idea which neighborhood in Madrid would be best to open an American restaurant. According to the data, Jerónimos or Estrella are the two neighborhoods with the least competition with 6 restaurants each. I would recommend Jerónimos because the neighborhood is closer to the center so tourist as well as locals can have access to the restaurant and Jerónimos has very popular attractions in Madrid like the famous Prado Museum and Retiro Park. However the final decision on optimal restaurant location will be made by stakeholders and owners based on specific characteristics of neighborhoods and locations, taking into consideration additional factors like attractiveness of each location (proximity to park or water), levels of noise / proximity to major roads, real estate availability, prices, social and economic dynamics of every neighborhood etc.