

Capstone Project - The Battle of Neighborhoods

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Introduction

Buenos Aires City is one of the largest cities in South America also a city with a look and some European customs. Buenos Aires and entire Argentina have a long history of international immigration. Migration mostly European and to a lesser extent from the Middle East occurred between the end of the 19th century and the first half of the 20th century (particularly Italian and Spanish, in that order). Buenos Aires City is home to nearly 3 million people (2010 census) and in the metropolitan area home to approximately 16 million.

Buenos Aires' quality of life was ranked 91st in the world, being one of the best in Latin America in 2018. It is the most visited city in South America, and the second-most visited city of Latin America (behind Mexico City) The city is a top tourist destination and is known for its preserved European (mostly french and english) architecture and rich cultural life.

In the last 151 years, the city has received millions of immigrants from all over the world, making it a melting pot where several ethnic groups live together and being considered one of the most diverse cities of the Americas. With all this cultural diversity, many businesses also saw an excellent business opportunity in Buenos Aires. Such is the case, that large companies decided to open their doors in this City.

As of January 2019, according to data from the National Directorate of Migration (DNM), the filings of Venezuelan citizens have increased fivefold in the last two years, reaching 114,557, although according to official estimates, the income in the same period was even higher, standing at 130,000. The report also highlighted that, in 2018, immigrants from Venezuela led, for the first time in history, the ranking of foreigners living in Argentina, surpassing those of Paraguayan and Bolivian nationality, until then those with the highest migratory flow in the, and detailed in the future the arrival of some 100,000 Venezuelans plus 2,930 In the first quarter of 2019, another 40,000 Venezuelan immigrants entered the country

Buenos Aires has an old chicken rotisserie tradition. The city is well known for having a large number of "porteños" rotisserie, and "Locos X el Pollo", for example, has been preparing chicken for many years. Today the tradition is maintained but the public is changing and looking for other ways to enjoy their Roasted Chicken. This is how chicken rotisserie were opening in the city in recent years. So as part of my final project, we will list and visualize all neighborhoods of Buenos Aires City looking for the best place to open a Venezuelan chicken rotisserie

Data

Dataset Extracted from the Website of the Government of the City of Buenos Aires

- Neighborhoods in Buenos Aires

Dataset: https://cdn.buenosaires.gob.ar/datosabiertos/datasets/desarrollo-humano-y-habitat/barrios-populares/barrios_populares_badata_WGS84.geojson

Description: This dataset contains the neighborhoods of Buenos Aires city.

- GeoSpace Data

Dataset: <http://cdn.buenosaires.gob.ar/datosabiertos/datasets/barrios/barrios.geojson>

Description: By using this GeoSpace data we will get the Buenos Aires borough boundaries that will help us visualize the Choropleth map.

- Apartment sale price

Dataset: <http://cdn.buenosaires.gob.ar/datosabiertos/datasets/acceso-vivienda-y-mercado-inmobiliario/precio-venta-deptos.csv>

Description: The average price of m2 (dollars) of apartments used and brand new for sale of 2 and 3 rooms. Source DGEyC-GCBA based on Argenprop database.

- Restaurants in each neighborhood of Buenos Aires

Data source: Foursquare API

Description: By using this API we will get all the venues in each neighborhood. We can filter these venues to get only Restaurants

Approach

- First, we will obtain geospatial information about the city's neighborhoods. Also the list of neighborhoods and to which commune it belongs, the average of m2 in dollars by neighborhood, list of cultural dependencies and universities. We will count them and place them on the map using Folium.
- With the Foursquare API, we will look for all the venues that are around the neighborhoods.
- We will filter all the venues that are Latin Restaurants, we will count them and place them on the map.
- Find ratings, likes, and tips for each Latin Restaurants using FourSquare.
- Sort the data and find the best candidate neighborhoods.
- Visualize results on the map.

With the datasets mentioned above, we will answer the following questions:

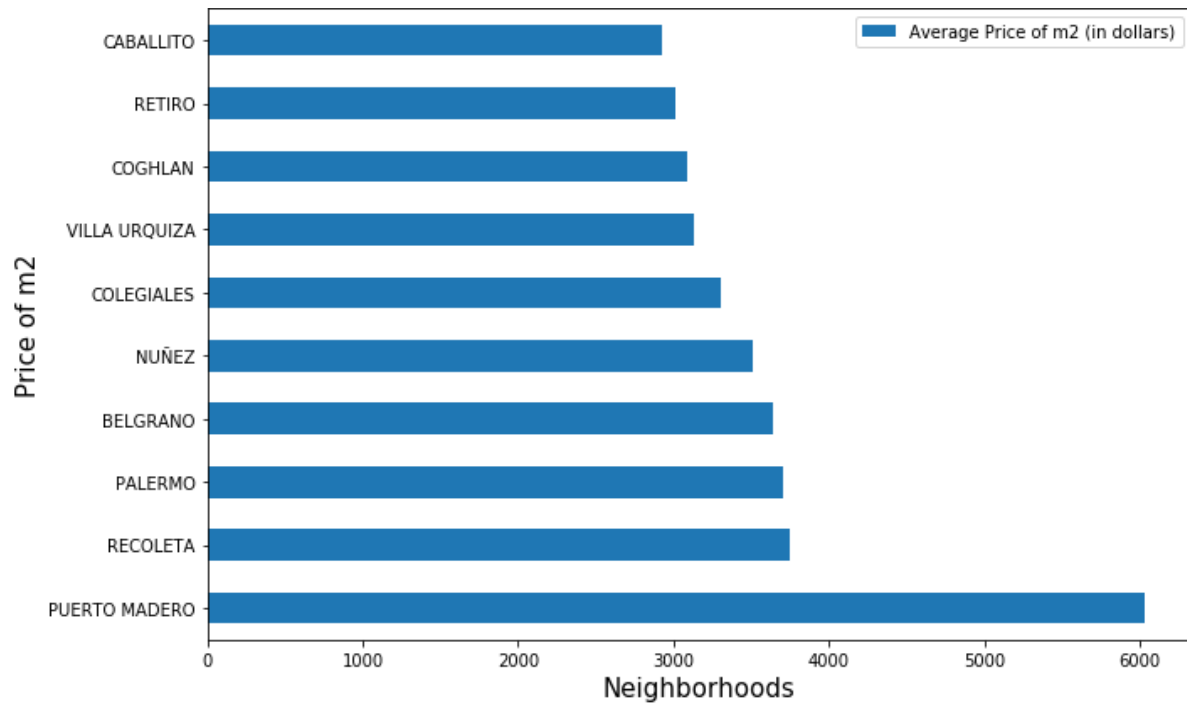
- What are the most expensive neighborhoods in Buenos Aires?
- What neighborhoods have more libraries, bookshops, cultural dependencies and universities?
- What neighborhoods have more Latin Restaurants?
- What areas lack Latin Restaurants?
- What areas have the potential to open a Venezuelan chicken rotisserie?
- What is best the location in Buenos Aires to open a Starbucks?

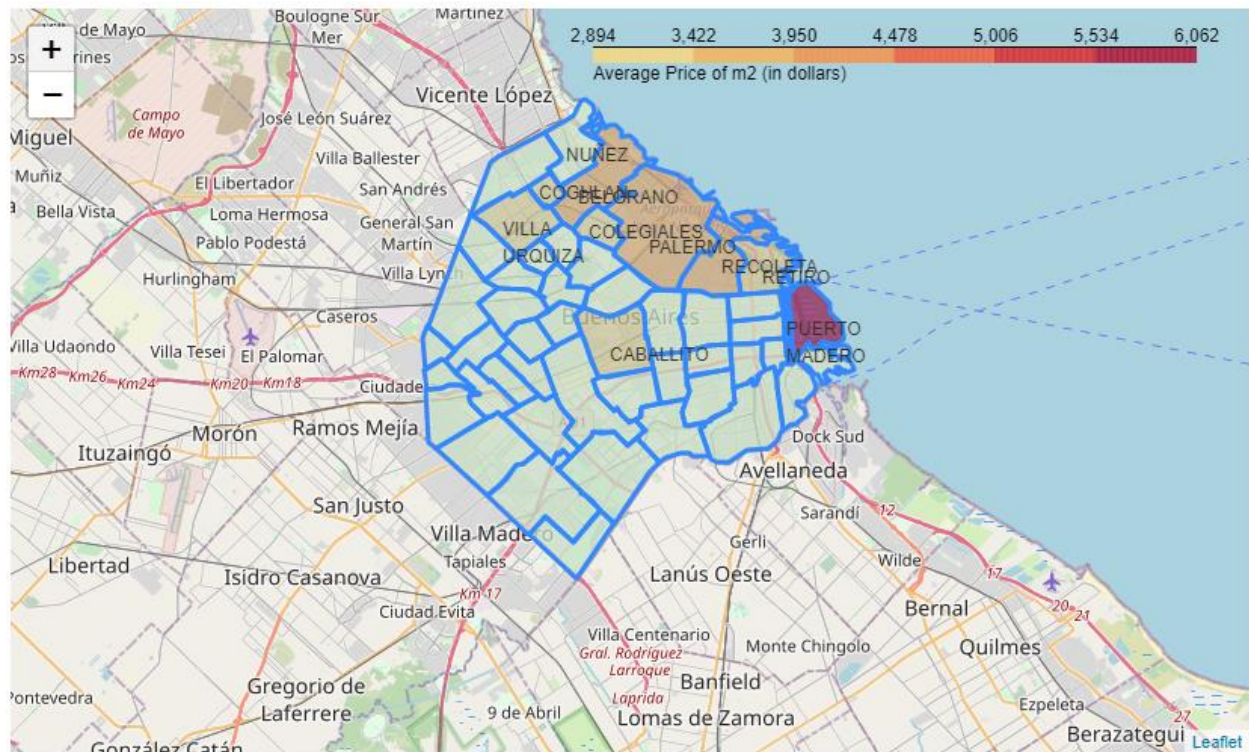
Data Analysis

To get the full code, access to my git repository (<https://github.com/cap00ar/Data-Science-Capstone>).

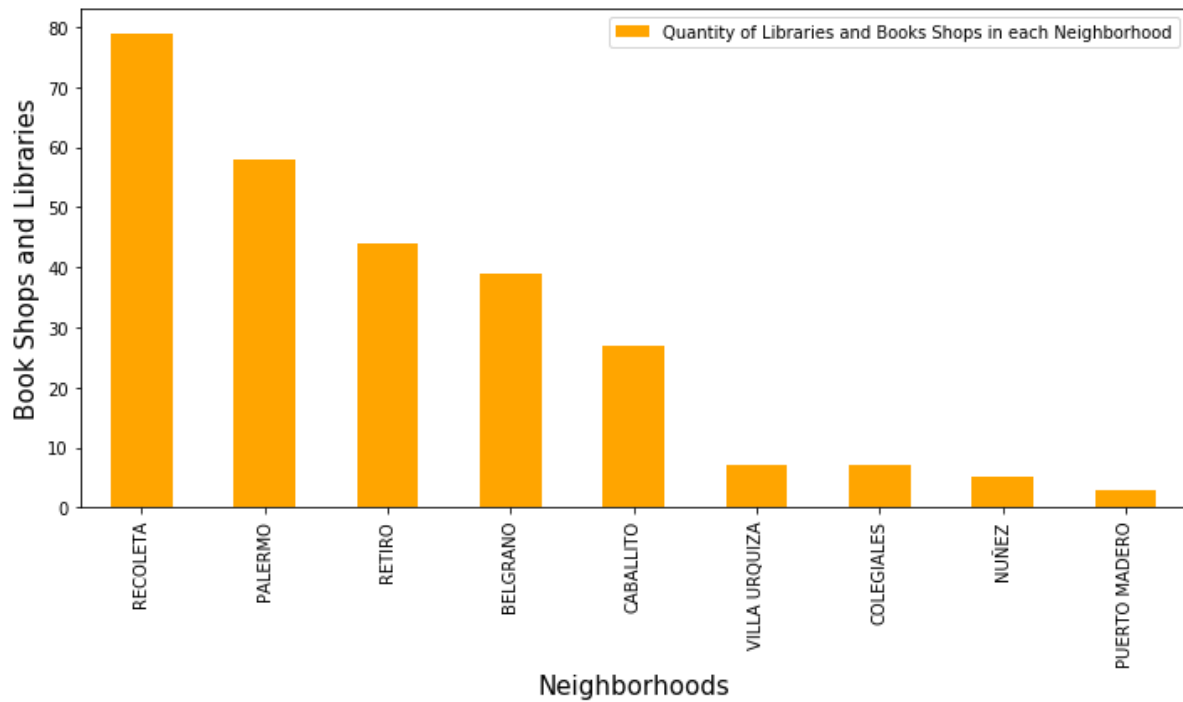
Results

- We can see that Puerto Madero is the most expensive neighborhood in Buenos Aires and Caballito is the cheapest on the list. These are our 10 Candidate Neighborhoods

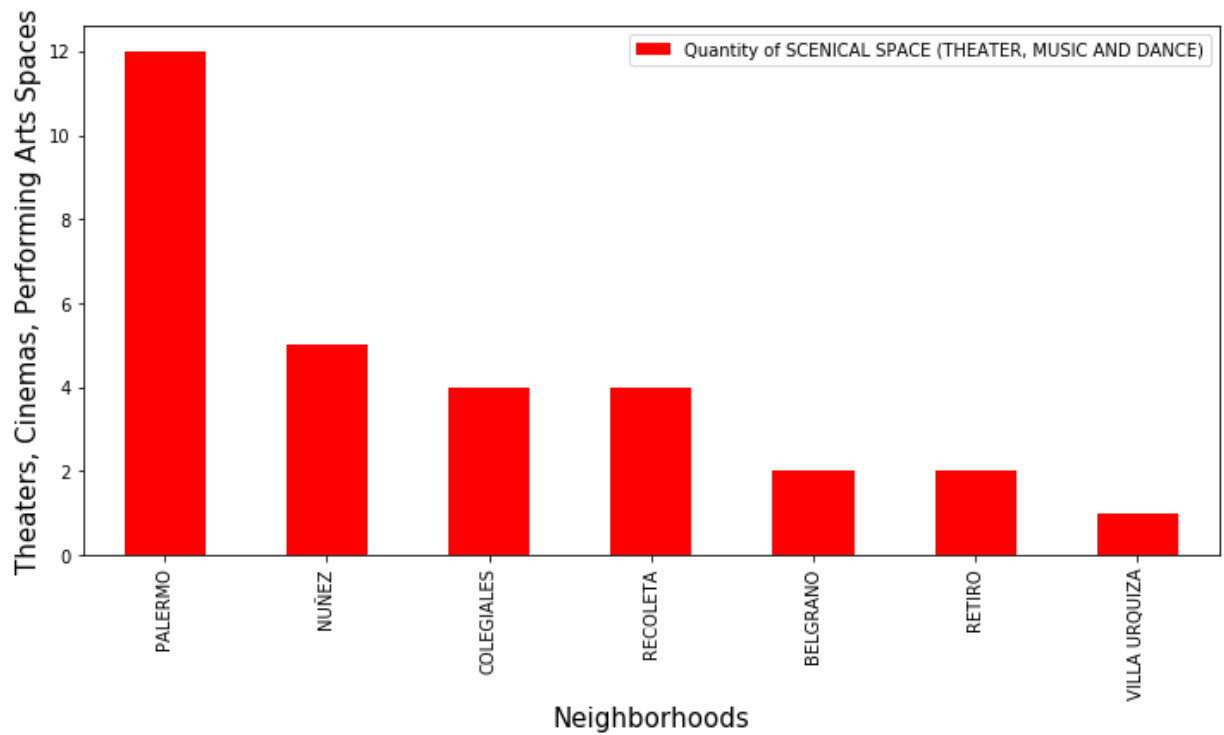




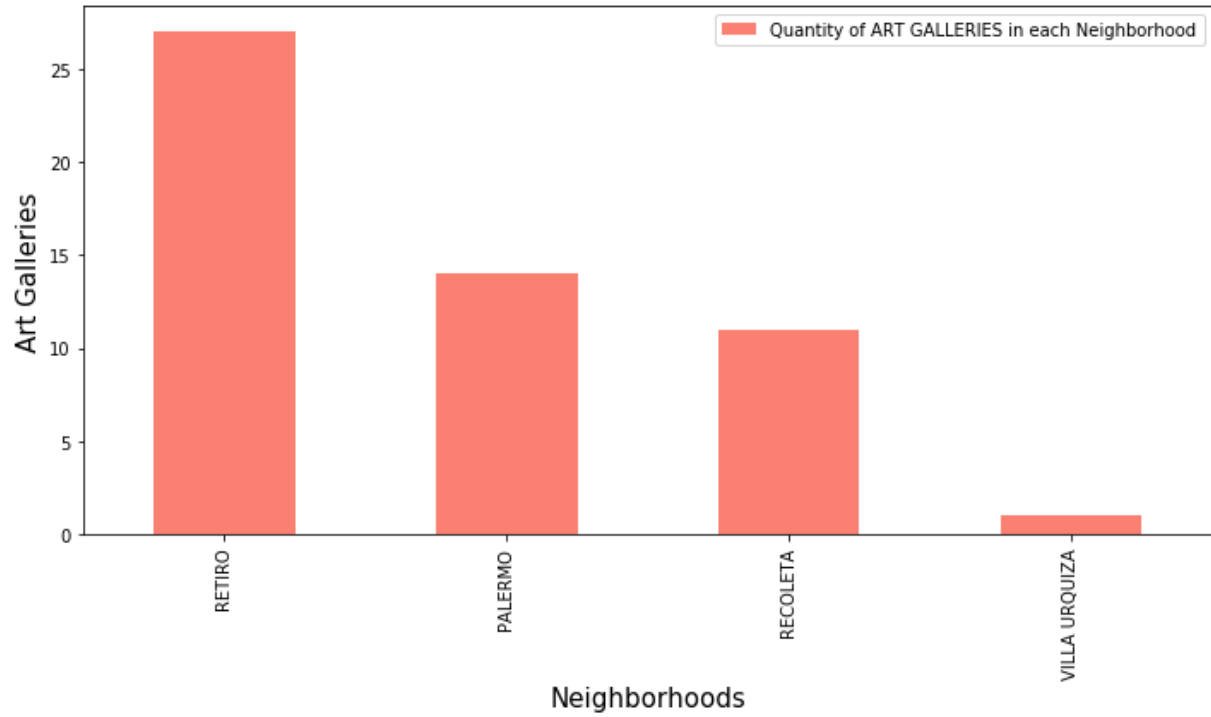
- Puerto Madero is the neighborhood with few Bookshops or Libraries and Recoleta's have more.



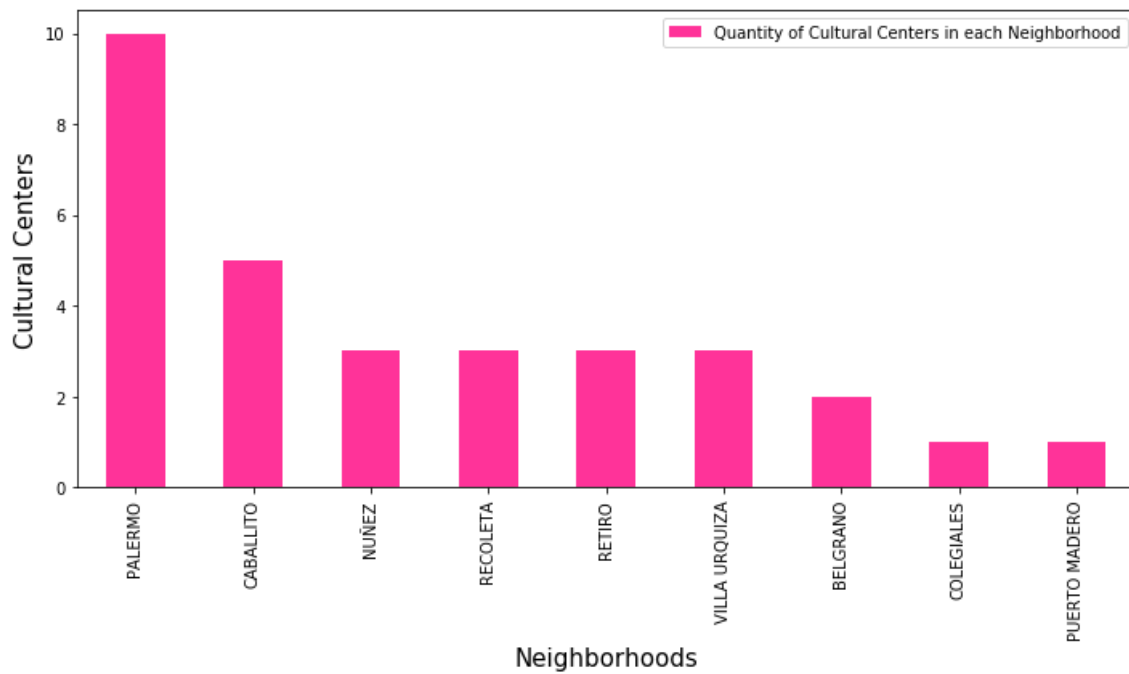
- Only a few neighborhoods have theatrical, music and dance activities. Film and TV studios are also located in one or two neighborhoods. Palermo is the area that has more activities of those listed above.



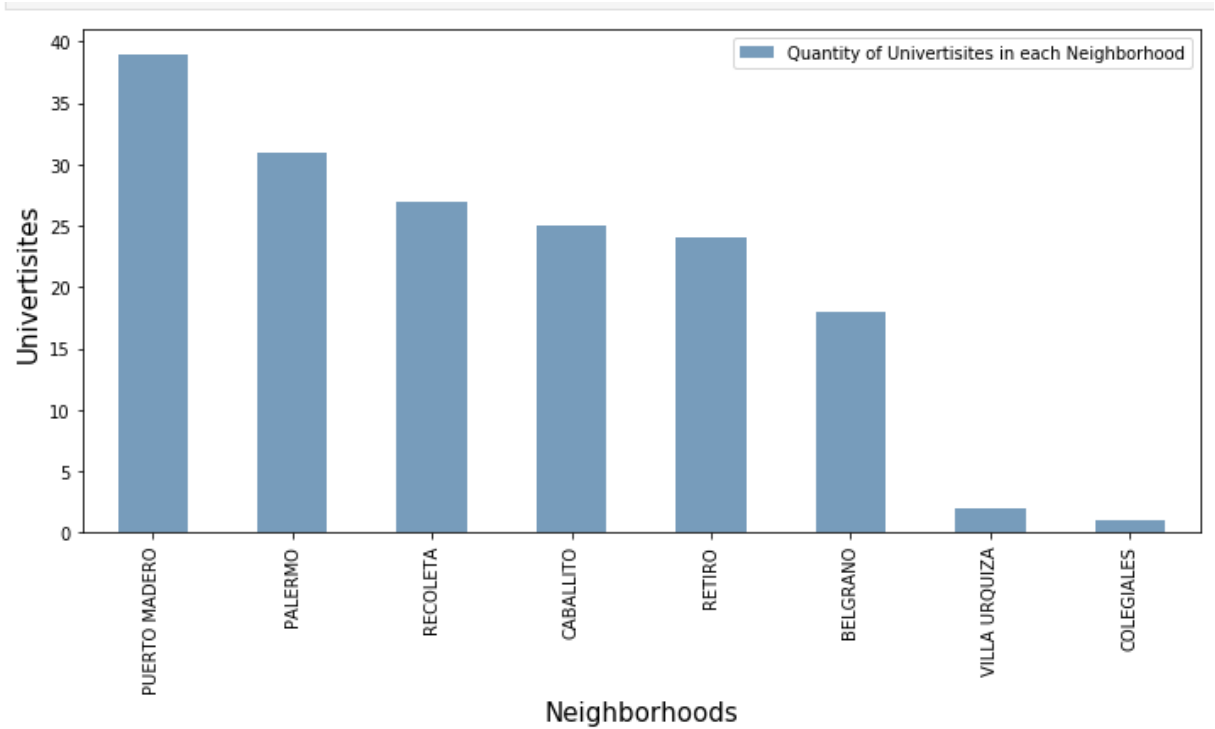
- We also found out that not all neighborhoods have art galleries. Retiro is the one where most art galleries are located.



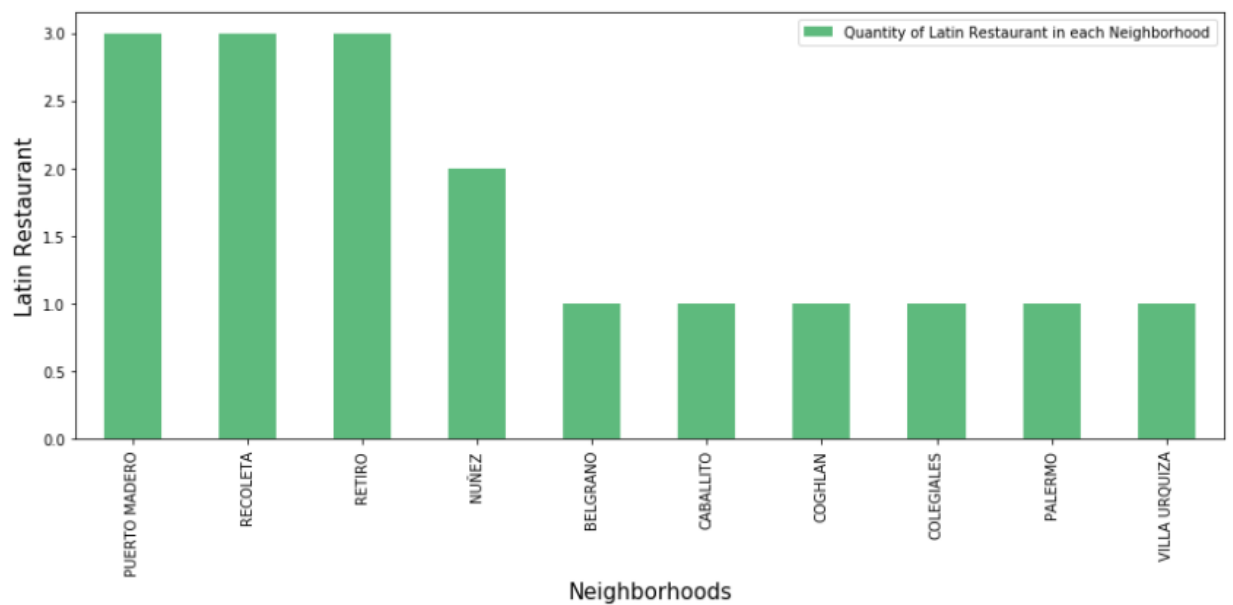
- Palermo has more Cultural Centers and Spaces in the city



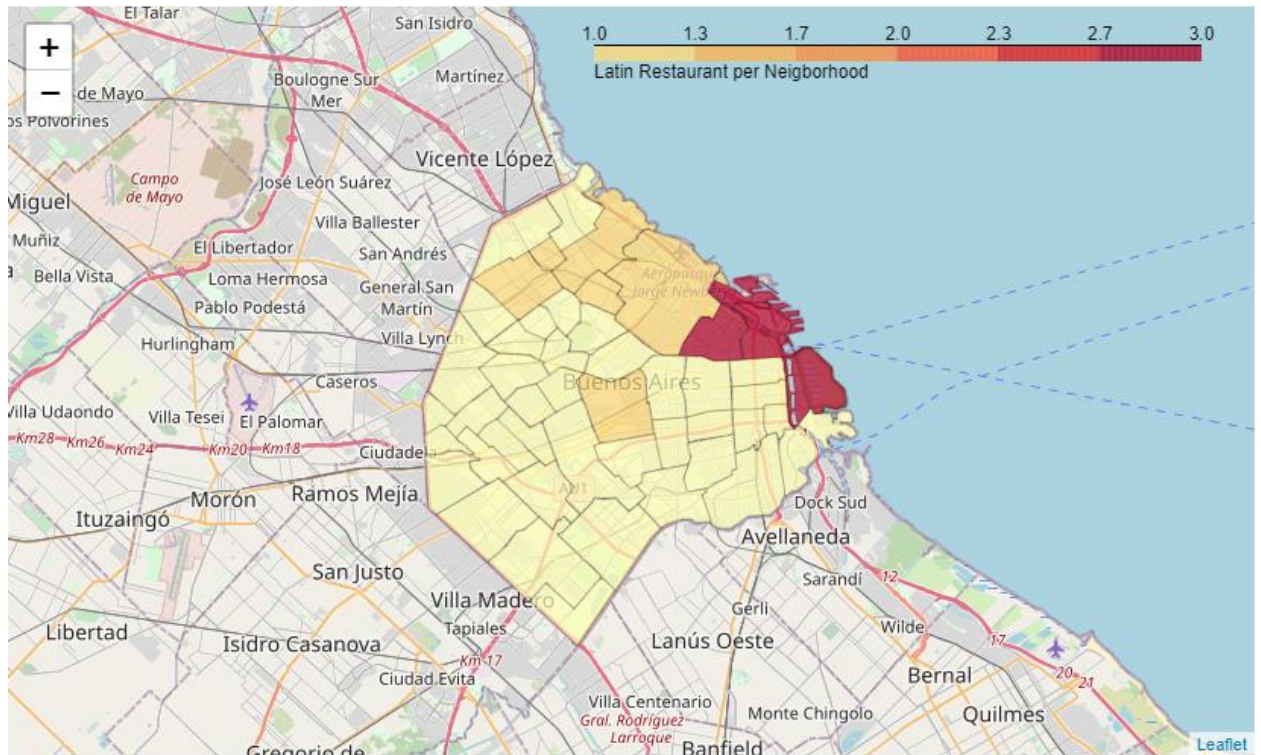
- Puerto Madero is the neighborhood that has more universities.



- Recoleta and Puerto Madero are the neighborhoods with more Latin Restaurant in the city. Caballito has less, so we found a lack of Latin Restaurant in that area.

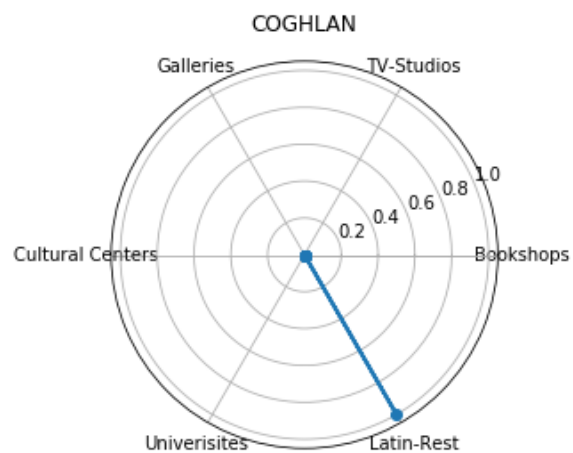
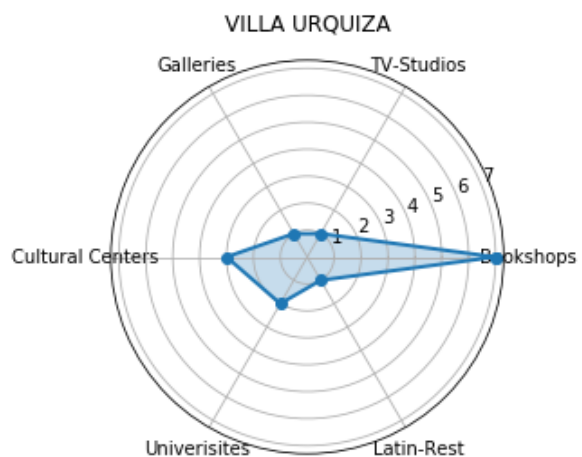
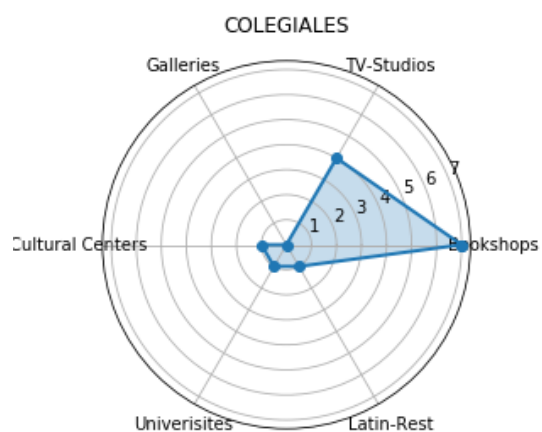
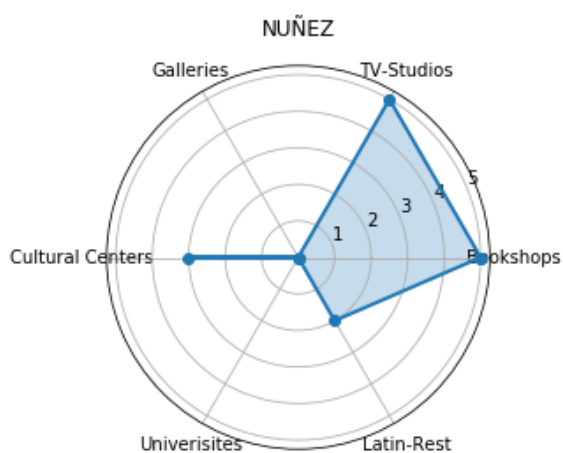
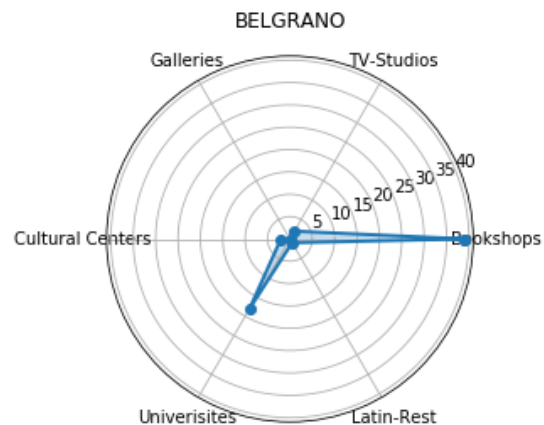
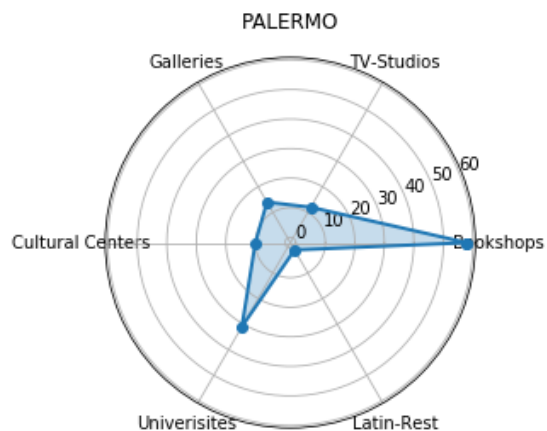


- Lets' see that on the map



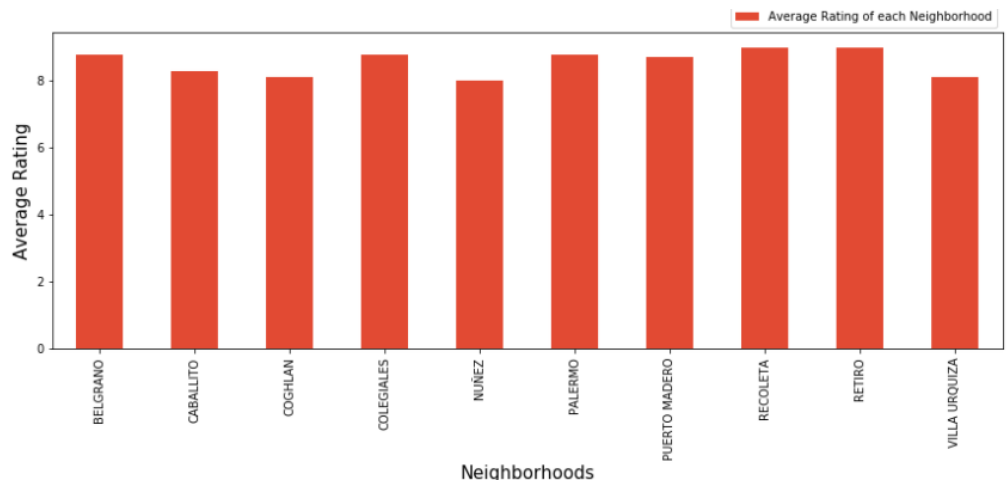
- All categories of all neighborhoods



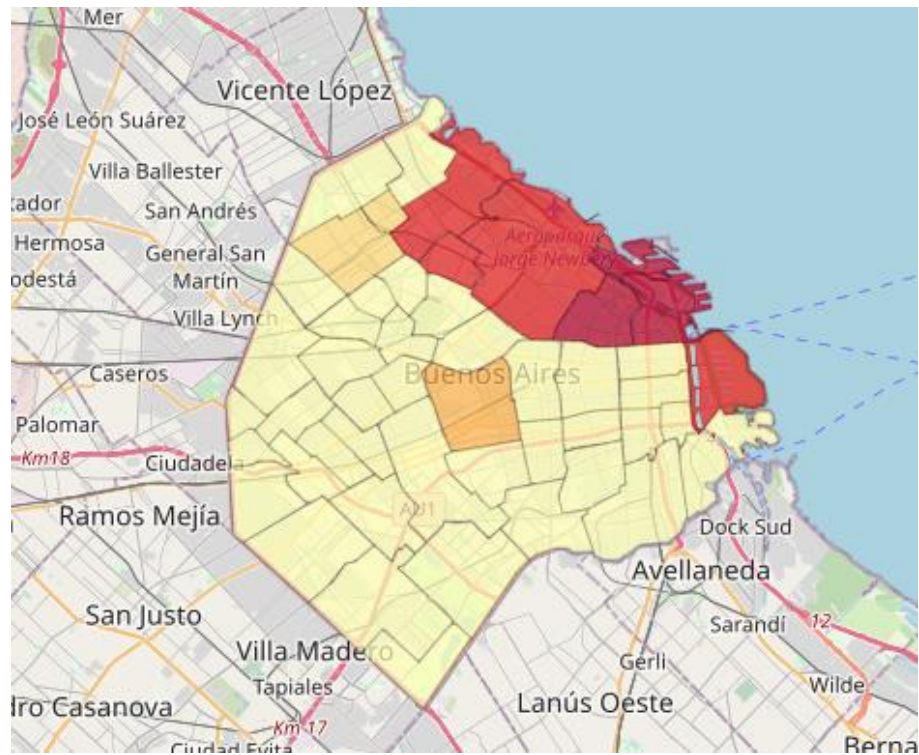




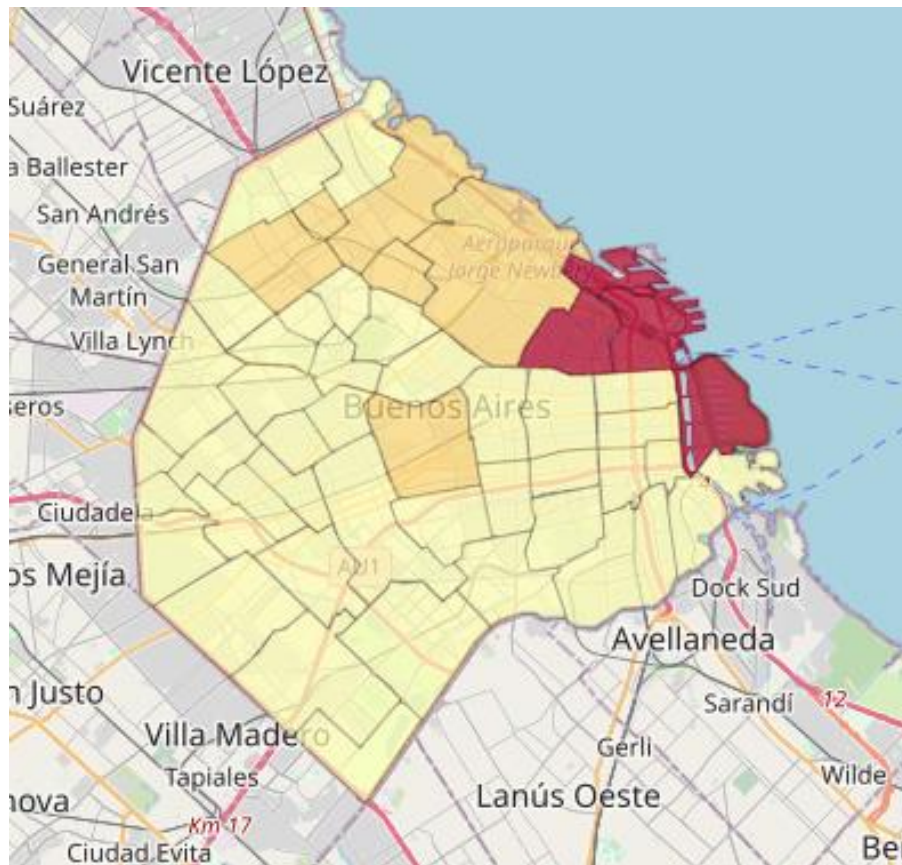
Average rating of each neighborhood



Average Latin Restaurant Rating Map



Quantity of Coffee Shops in each Neighborhood



Discussion

We discovered that Puerto Madero, Recoleta are the most expensive neighborhoods to live, and so they are also the ones with more Latin Restaurant. Caballito is the cheapest neighborhood and also the one with few Latin Restaurant. Palermo, Retiro and Recoleta are the neighborhoods with more cultural activity. Puerto Madero is where there are more universities. In the middle is Caballito with an acceptable amount of Universities and Cultural Activities. Nuñez is the neighborhood with the worst rating.

Conclusions

Based on the results described above, we find we can conclude that:

Caballito has the potential to open a Venezuelan chicken rotisserie. It's the neighborhood where there are fewer Latin Restaurants and the average price of m2 is the lowest. It also has a significant number of Universities, Theaters, Cinemas, Cultural Centers which make the neighborhood a meeting point for many people and make this neighborhood the best candidate due to the low price and the low exploitation of the market.

Limitations

The result of the analysis is based on the results obtained from Foursquare. We use venues registered both in the Government of the City of Buenos Aires and in Foursquare. Existing venues not registered are excluded from this analysis