CAPSTONE PROJECT – THE BATTLE OF NEIGHBORHOODS – REPORT

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INTRODUCTION

The City of Buenos Aires is the capital and most populous city of the Argentine Republic. Officially the city is divided into 15 communes that group 48 neighborhoods. The estimated population of the city is 3,075,646 habitants and that of the Aglomerate Gran Buenos Aires is 17,541,141 habitants, the latter being the second agglomerate of Hispanoamerica, the second in South America and one of the 20 largest cities in the world.

Buenos Aires is a cosmopolitan city and an important tourist destination. Its complex infrastructure makes it one of the most important metropolises in America and is a global city of alpha category, given its influences on trade, finance, fashion, art, gastronomy, education, entertainment and mainly in its marked culture. According to a quality of life study (2016) by Mercer Human Resource Consulting the city is ranked 93rd globally and second in Latin America after Montevideo.

The gastronomy of the city of Buenos Aires is characterized by two great European contributions: Italian and Spanish, is just as varied as the rest of the culture, including red meats, fish, pastas and empanadas, which are originating in the northwest of Argentina. Buenos Aires is characterized by a huge offer of bars and restaurants. The city has a privileged group of 60 bars with great history and renown within the city. The city also has a large number of restaurants of international food such as Italian, Chinese, Spanish, Japanese, Korean, etc.

With the rise of bars dedicated to craft beer, this project will seek to list and visualize all the neighborhoods of the City of Buenos Aires in search of the best place to open a new bar.

DATA

Datasets Extracted from the Website of the Government of the City of Buenos Aires.

	Dataset	Description
GeoSpace Data	http://cdn.buenosaires.gob.ar/datosabiertos/datasets/barrios/barrios.geojson	By using this GeoSpace data we will get the Buenos Aires borough boundaries that will help us visualize the Choropleth map.
Apartment sale price	http://cdn.buenosaires.gob.ar/datosabiertos/datasets/acceso-vivienda-y-mercado-	This dataset contains all the neighborhoods of Buenos Aires city. The average price of m2 (dollars) of apartments used and brand new for sale of 2 and 3 rooms. Source

	inmobiliario/precio-venta-deptos.csv	DGEyC-GCBA based on Argenprop database.
Cultural Dependencies	http://cdn.buenosaires.gob.ar/datosabiertos/datasets/dependencias-culturales/dependencias-culturales.csv	This dataset contains the geographical location of the cultural dependencies in the City including bookstores, bars, clubs, radios, libraries, discotheques, museums, art galleries and carousels in the City.
Universities	http://cdn.buenosaires.gob.ar/datosabiertos/datasets/universidades/universidades.csv	This dataset contains the geographical location and contact details of the Universities in the City
Craft beer bar in each neighborhood of Buenos Aires	Foursquare API	API to get information about all the venues in each neighborhood. We can filter these venues to get only Bar or Craft Beer Shops

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 Craft Beer Shops, we will count them and place them on the map.

- Find ratings, likes, and tips for each Craft Beer Shops using FourSquare.

- Sort the data and find the best candidate neighborhoods.

- Visualize results on the map.

METHODOLOGY

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 Craft Beer Shops?

- What areas lack Craft Beer Shops?

- What areas have the potential to open a Bar?

- What is the best location in Buenos Aires to open a Bar?

The exploratory data analysis, any inferential statistical testing, and what machine learnings were used and why are explained in the Jupyter Notebook. To get the full code access to https://github.com/myunis96/Coursera_Capstone/blob/master/Capstone%20Project%20-%20The%20Battle%20of%20Neighborhoods%20-%20FINAL.ipynb

RESULTS

- We can see that Puerto Madero is the most expensive neighborhood in Buenos Aires and Caballito is the cheapest on the top ten list showing below.
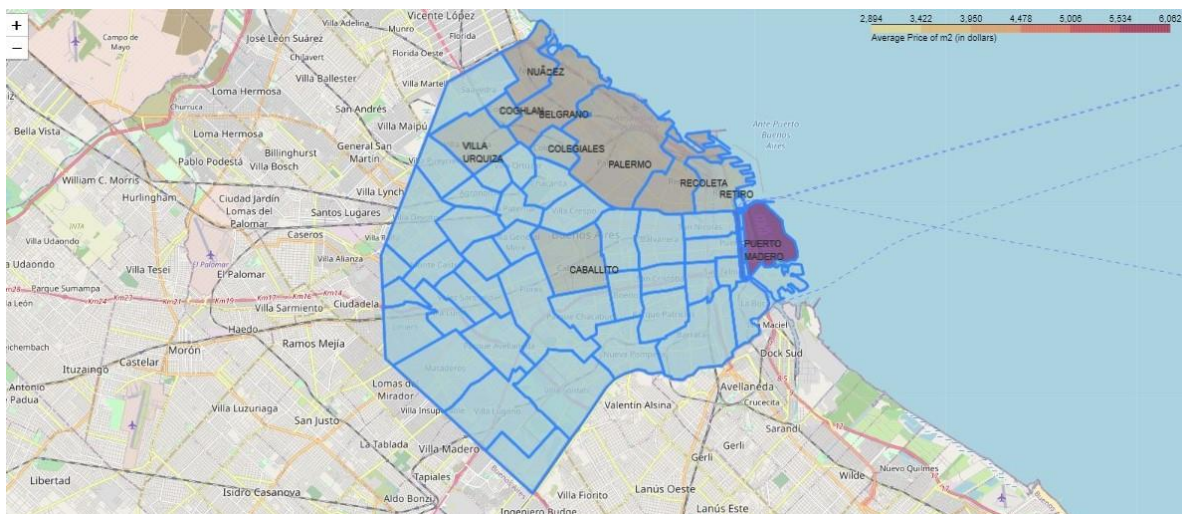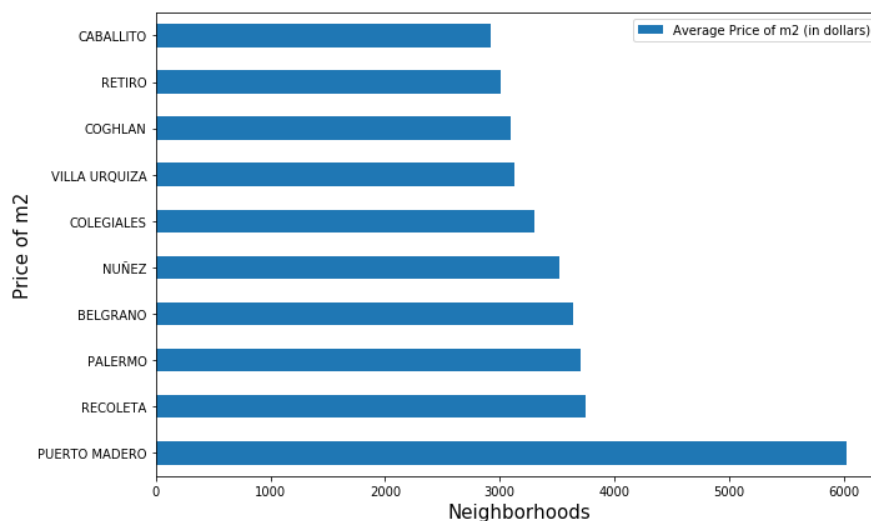
- Puerto Madero is the neighborhood with few theaters, cinemas and performing arts spaces. Palermo is by far the neighborhood that has more in this category.
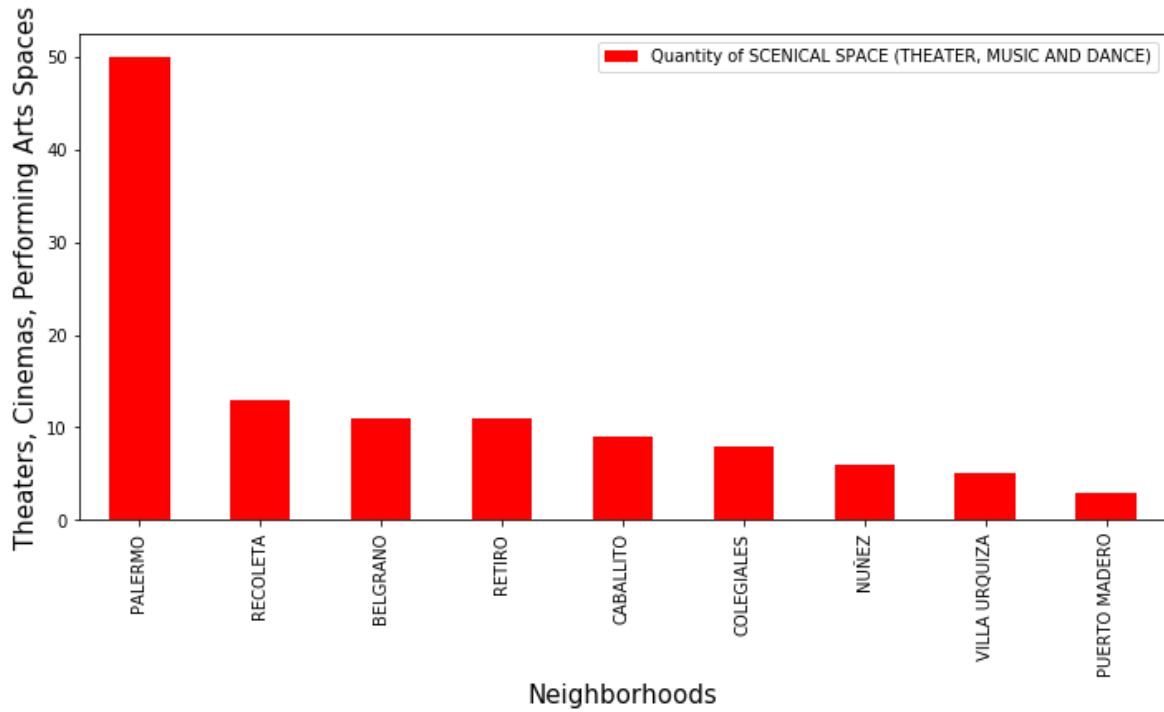
- Talking about Art Galleries, Cultural Centers and Museums, Retiro, Recoleta and Palermo have the most amount of places including in his category.
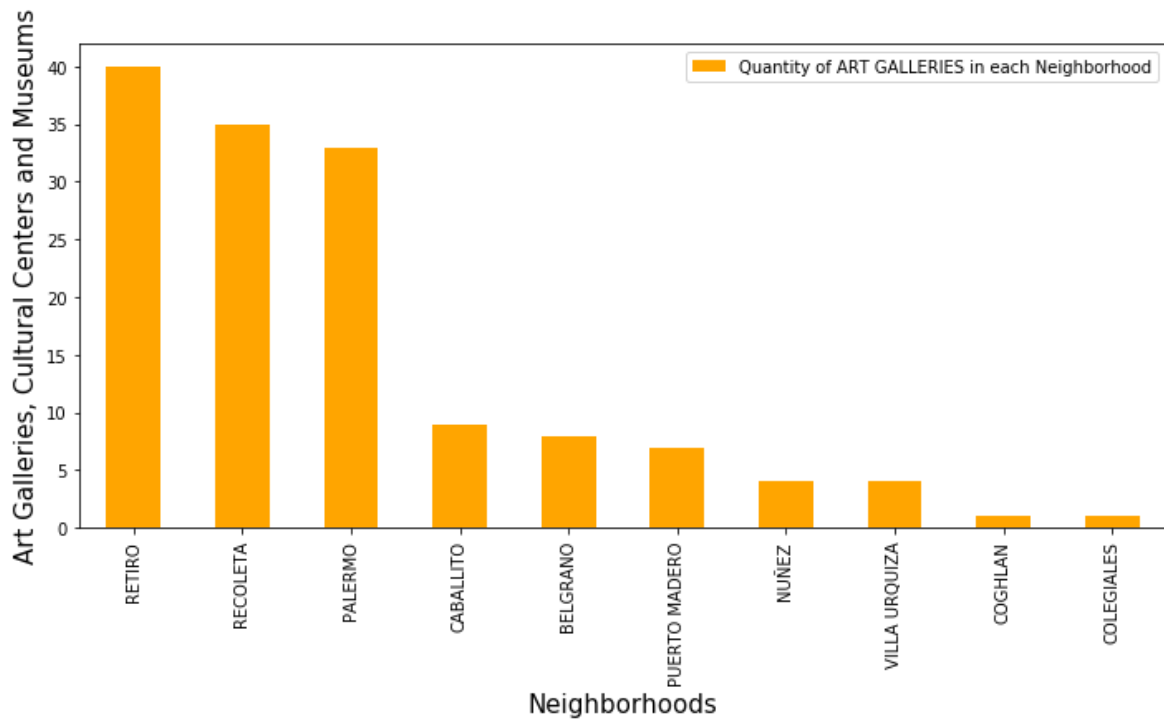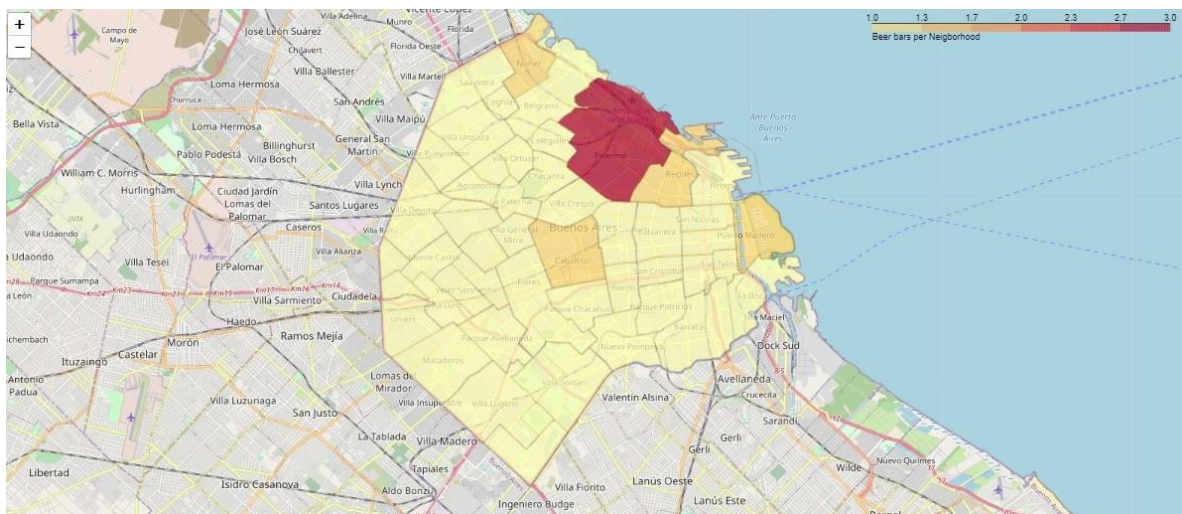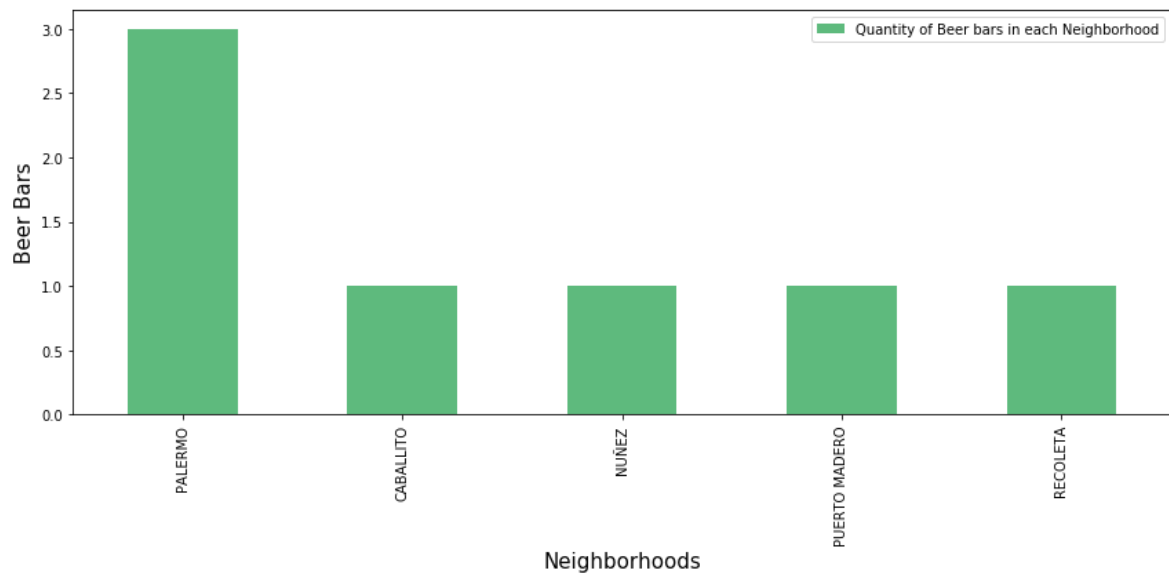
- Recoleta and Palermo are the neighborhoods that have more bars followed by Caballito, Retiro and Villa Urquiza.
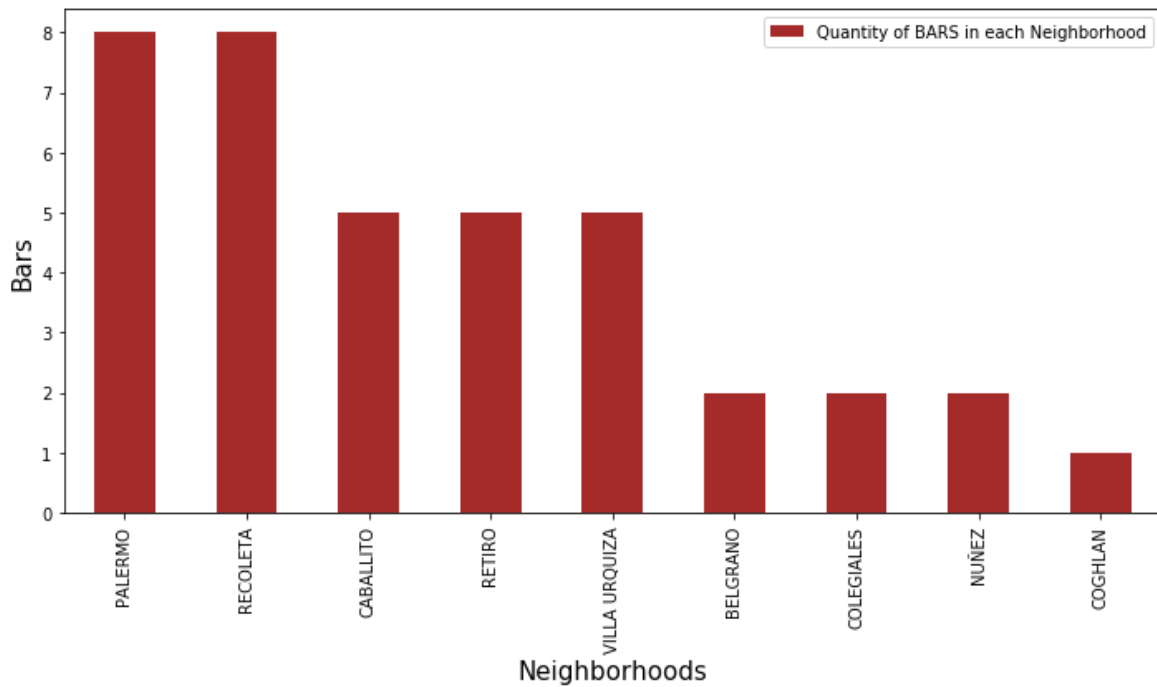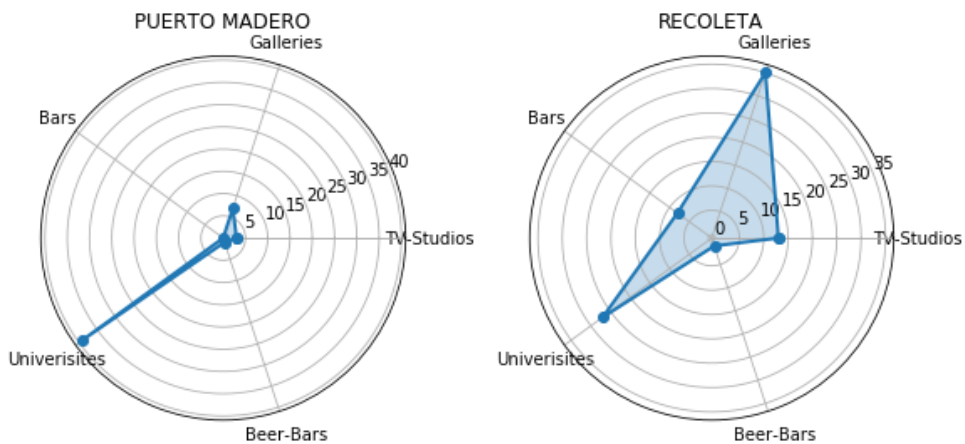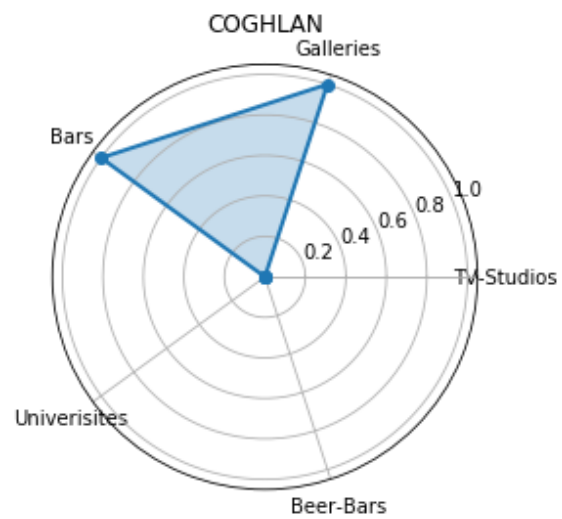

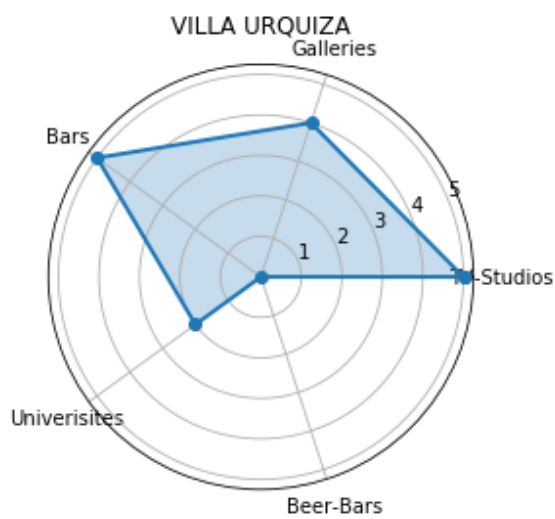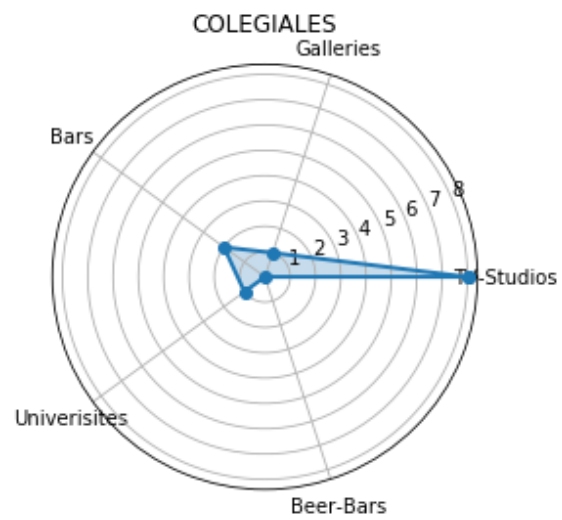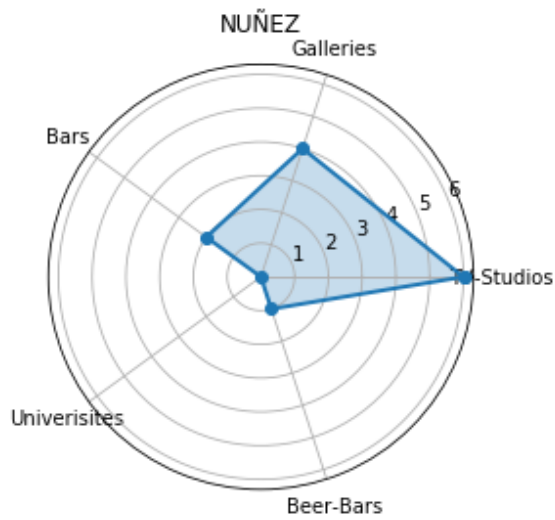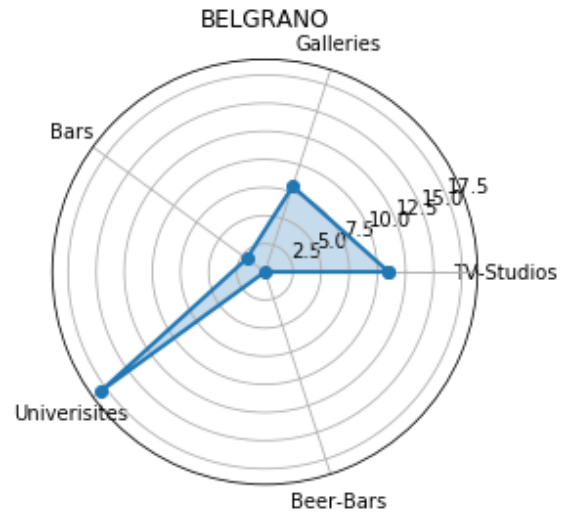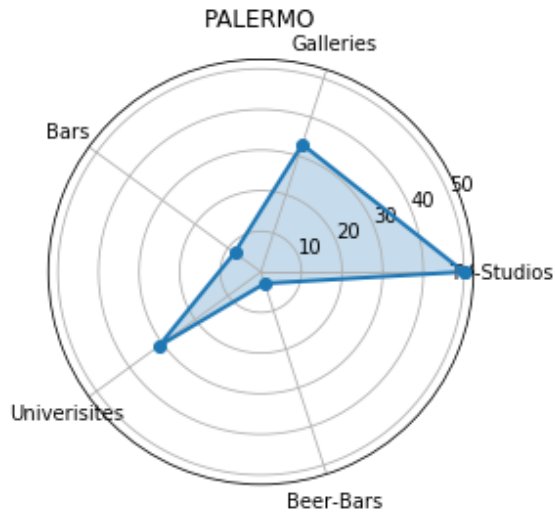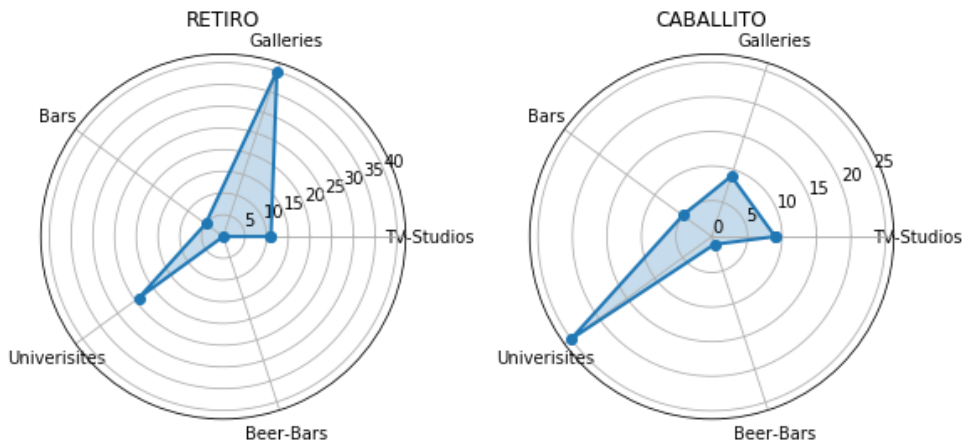- Puerto Madero is the neighborhood that has more universities.
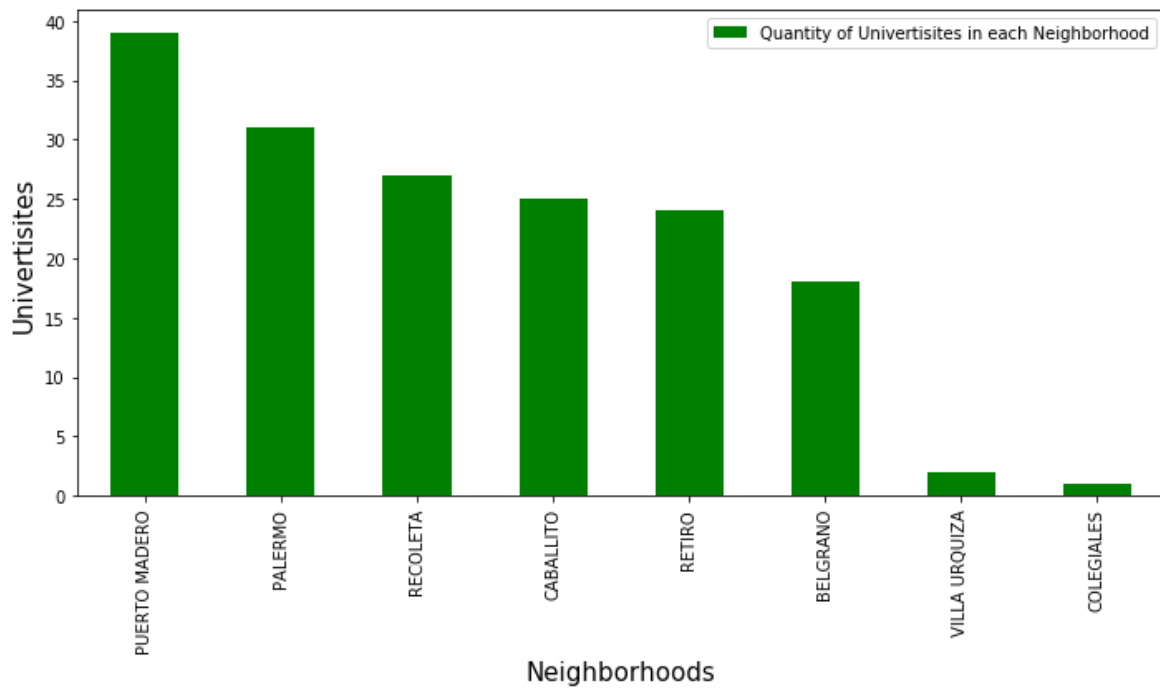
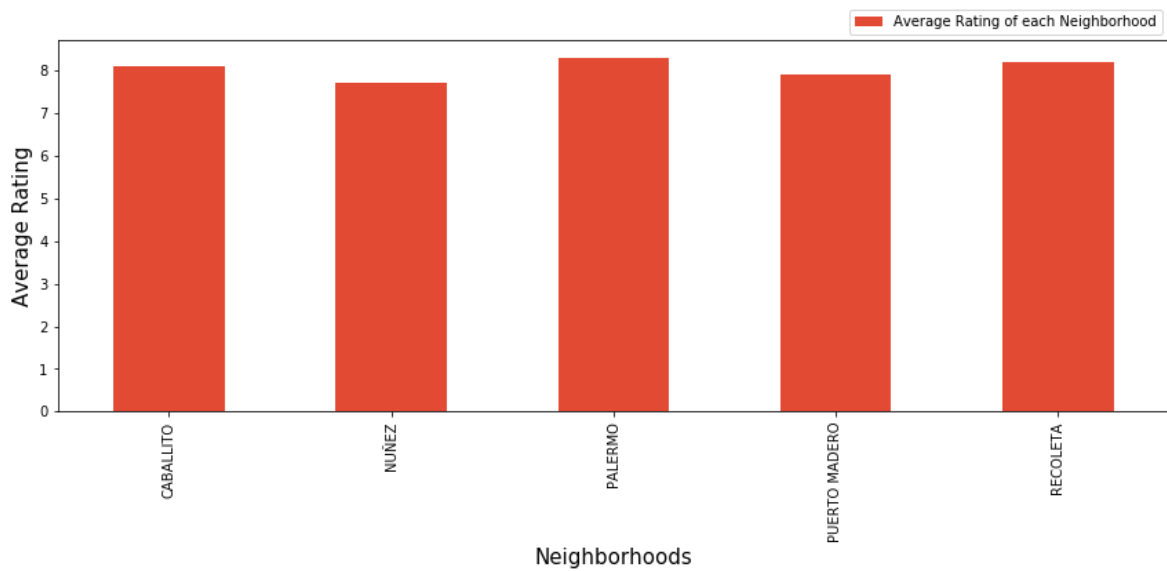- Not all the neighborhoods haver Beer Bars. Palermo is the one with more Beer Bars.

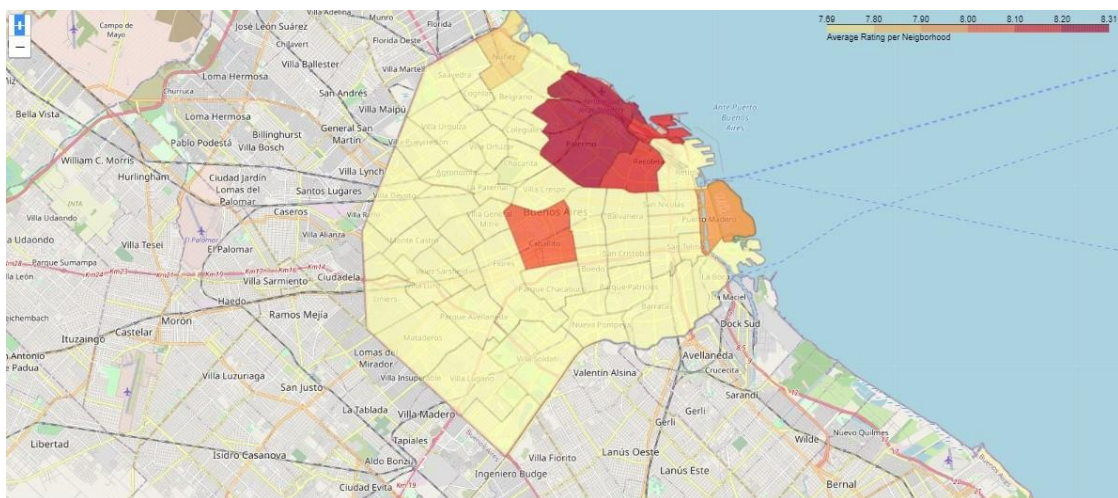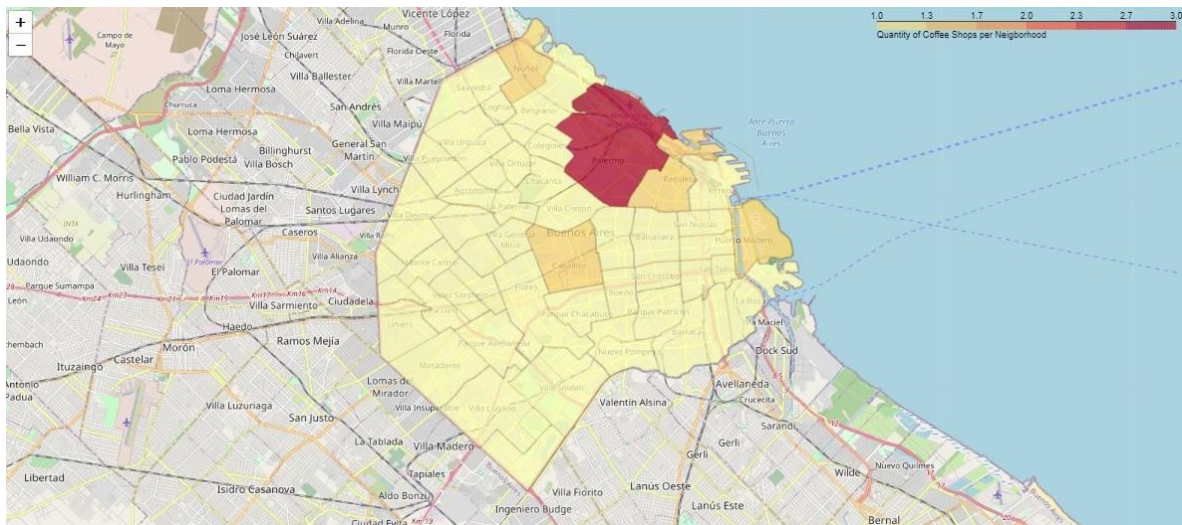- To sum up, we can compare all categories of each neighborhood in a unique graphic.

PALERMO

BELGRANO

NUÑEZ

COLEGIALES

VILLA URQUIZA

COGHLAN

Galleries, Bars, Tv-Studios, Univerisites, Beer-Bars

- Average rating of each neighborhood

- Average Beer Bars rating map.

- Quantity of Beer Bars in each neighborhood.

DISCUSS

We discovered that Puerto Madero, Recoleta and Palermo are the most expensive neighborhoods to live, and Palermo is the ones with more beer bars. Caballito is the cheapest neighborhood and has a good customer's rating in its Beer Bar.

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.

Only five neighborhoods have Beer Bars. Palermo is the neighborhood with more beer bars and the customer's rating is the best.

Caballito and Recoleta are the second best ranked on Beer Bars Rating, Nuñez is the neighborhood with the worst rating.

CONCLUSIONS

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

Recoleta has the potential to open a Craft Beer Bar. While it is an expensive neighborhood to live in, it is a neighborhood with few bars.It also has a significant number of 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 exploitation of the market. The number of universities is a key aspect of the choice, with young people being the main target of the market. Recoleta's proximity to Puerto Madero is another important factor, as the largest number of universities are concentrated there.