

Cultural Spaces in the city of Buenos Aires

by Jorge Clavijo

Introduction

Argentina is among the most visited countries in South America and, in turn, the Autonomous City of Buenos Aires (CABA) has 5.5 million visits per year [1] making this city one of the 20 preferred destinations in the world. The tourist places go beyond the historic center of the city that are found in the Monserrat and San Telmo neighborhoods, but rather, each neighborhood offers countless cultural spaces for tourists. The culture is changing and thriving and cultural sectors that flourished in a certain neighborhood wither away to give way to new spaces.

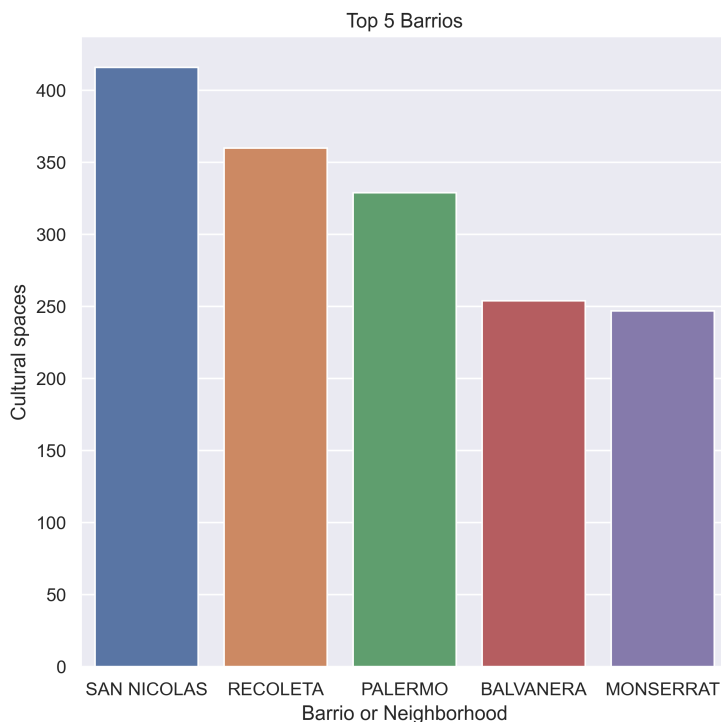
The objective of this report is to contrast the cultural spaces that are located in each neighborhood of the city in order to guide future tourists who are visiting according to their cultural preferences.

The problem that arises is what is the greatest cultural attraction of the city of Buenos Aires? What neighborhoods or groups of neighborhoods offer the best alternative for a group of tourists in terms of culture?

Having this updated information would be relevant for many of the tourism agencies that point to the city of Buenos Aires as a focus of culture in South America.

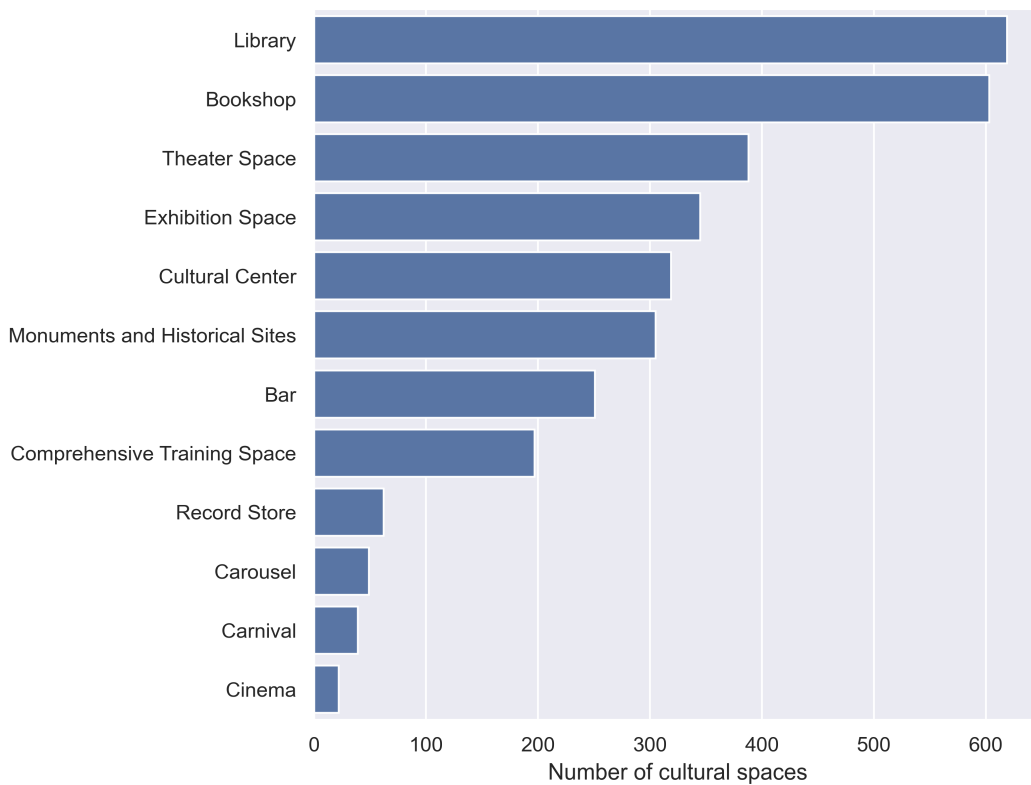
Data

In the first instance, we work with the Foursquare location data on venues for the City of Buenos Aires that focus on cultural sectors. To make a more accurate report, updated data on cultural spaces in CABA are needed. The city government offers a data set of all kinds according to its dedicated website.



The data is used which shows a list of public, private and independent cultural spaces located in the City of Buenos Aires [2]. The website also provides the boundaries and geographic location of the City's neighborhoods [3].

From the data, 3199 sites are obtained that include bars, libraries, carousels, cultural centers, record stores, exhibition spaces, training spaces, scenic spaces, fair spaces, bookstores, monuments, historical places and movie theaters of all the Buenos Aires neighborhoods.



Methodology

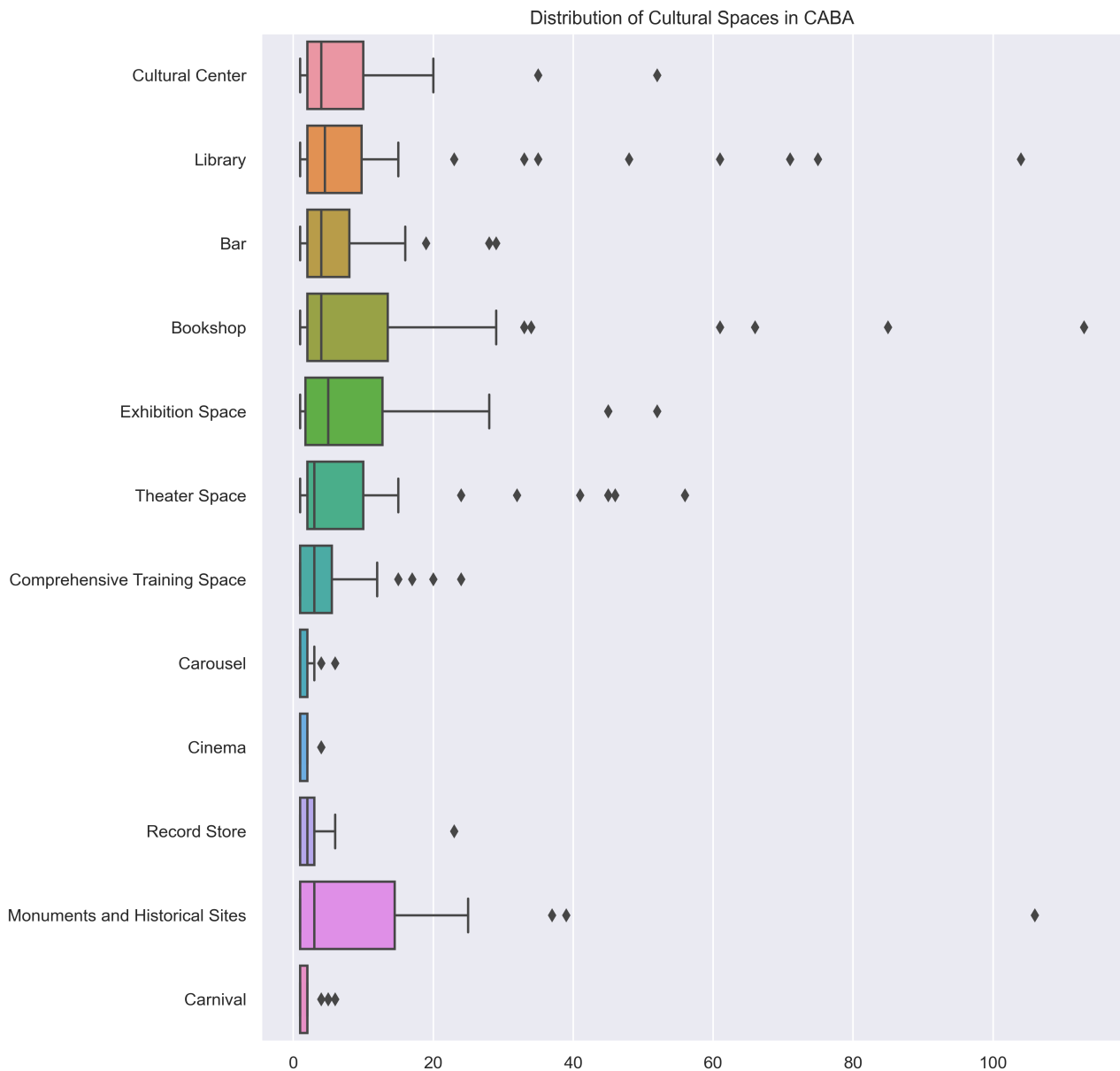
The raw data have enough information such as the category of the cultural space, primary function and name of the establishment, its address, latitude-longitude and the neighborhood to which the cultural establishment belongs, as well as information from social networks. We proceed with data cleaning to leave the data ready for analysis.

	Cultural space	Name	LATITUD	LONGITUD	BARRIO
0	Bar	8 ESQUINAS	-34.578517	-58.460137	CHACARITA
1	Comprehensive Training Space	ESCUELA METROPOLITANA DE ARTE DRAMATICA	-34.581638	-58.457072	CHACARITA
2	Theater Space	GIER MUSIC	-34.578782	-58.456857	CHACARITA
3	Monuments and Historical Sites	BOVEDA QUE GUARDA LOS RESTOS DE CARLOS GARDEL	-34.587230	-58.455850	CHACARITA
4	Monuments and Historical Sites	ARCHIVO HISTORICO DEL CREMATARIO MUNICIPAL	-34.587230	-58.455850	CHACARITA
...
3194	Theater Space	LAS HERAS, JUAN GREGORIO de, GRAL.	-34.585019	-58.408170	PALERMO
3195	Theater Space	SEEBER, FRANCISCO, Intendente	-34.575201	-58.418913	PALERMO
3196	Theater Space	DONADO 1726	-34.576080	-58.472142	VILLA ORTUZAR
3197	Theater Space	PLAZA MARIANO BOEDO	-34.622189	-58.412589	BOEDO
3198	Theater Space	PARQUE SARMIENTO	-34.554019	-58.499939	SAAVEDRA

3199 rows x 5 columns

To get an idea of how the cultural spaces are distributed in the city, the distribution is assembled taking into account the amount of a given cultural space. For example: number of Libraries in a selected neighborhood such as Palermo. Analyzing the data in the first instance, several outliers points are observed that belong to neighborhoods with cultural spaces greater than 60. These are:

	BARRIO	Cultural Space	Total
276	SAN NICOLAS	Bookshop	113
233	RECOLETA	Monuments and Historical Sites	106
277	SAN NICOLAS	Library	104
234	RECOLETA	Bookshop	85
140	MONSERRAT	Library	75
235	RECOLETA	Library	71
15	BALVANERA	Bookshop	66
175	PALERMO	Bookshop	61
16	BALVANERA	Library	61



To group the neighborhoods based on shared characteristics, the K-mean grouping method is used. Before that, an analysis is carried out of which is the cultural space with the greatest “weight” for each neighborhood. For this purpose, we work with one-hot encoding, obtaining a data frame with dummy values that are finally grouped by neighborhood and their medians are calculated, thus obtaining the weight that each cultural space has for all neighborhoods in Buenos Aires.

The data frame obtained will then be used to calculate the clusters of the k-mean method. The dataframe is transformed with columns of the most common cultural spaces for further analysis:

	Neighborhood	1st Most Common CE	2nd Most Common CE	3rd Most Common CE
0	AGRONOMIA	Library	Cultural Center	Bar
1	ALMAGRO	Theater Space	Cultural Center	Bookshop
2	BALVANERA	Bookshop	Library	Theater Space
3	BARRACAS	Library	Cultural Center	Monuments and Historical Sites
4	BELGRANO	Bookshop	Library	Exhibition Space
5	BOCA	Exhibition Space	Theater Space	Bar
6	BOEDO	Cultural Center	Bar	Theater Space
7	CABALLITO	Bookshop	Library	Theater Space
8	CHACARITA	Monuments and Historical Sites	Theater Space	Cultural Center
9	COGHLAN	Theater Space	Library	Exhibition Space

The complete dataframe is found in the code of this report, a brief description of it yields the following results:

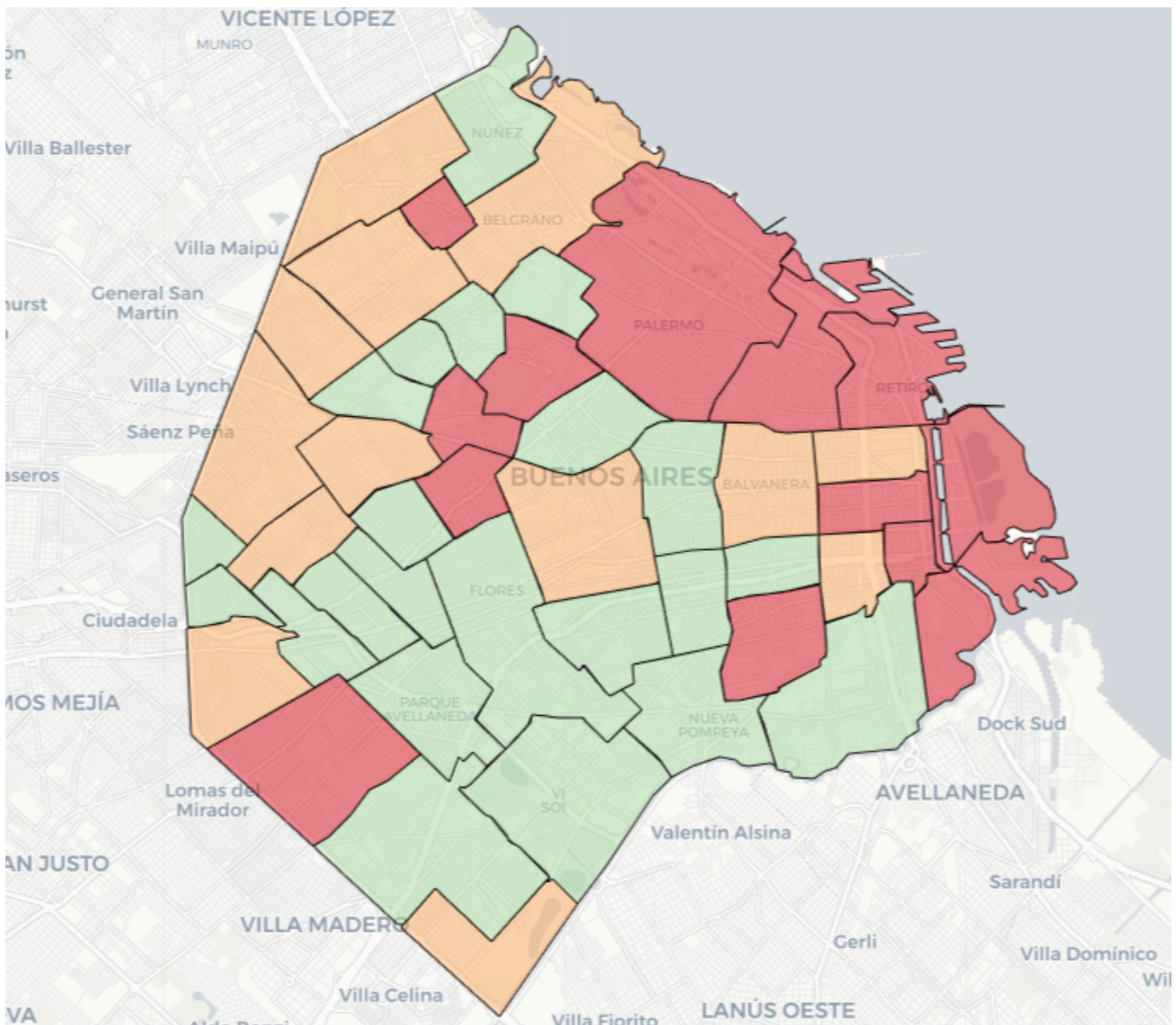
	1st Most Common CE	2nd Most Common CE	3rd Most Common CE
count	48	48	48
unique	9	9	8
top	Library	Library	Theater Space
freq	11	16	13

A very interesting preliminary result is observed, that of 48 Buenos Aires neighborhoods the first and the second most common cultural space are Libraries. This result will be analyzed in the results section.

Finally we can partition the database into groups of neighborhoods that have similar characteristics and thus target specific group of clients. In this way, a group of tourists can be offered a personalized experience when visiting CABA.

K-means will be used to find clusters, K-Means algorithm is one of the most common cluster method of unsupervised learning. You get 3 clusters, Orange, Green and Red.

The following map was made with a geojson file [3], the folium library and the choropleth method.



Results

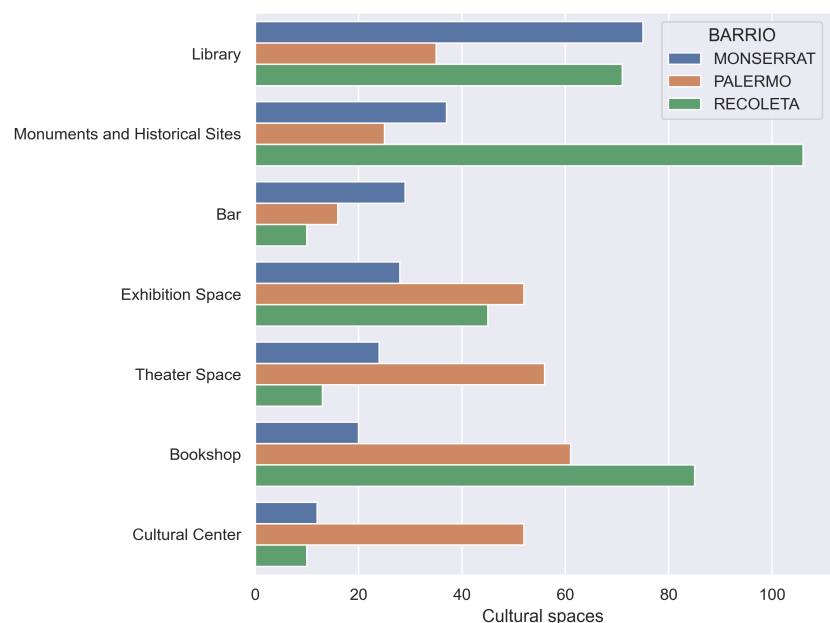
Similar clusters are analyzed and similar characteristics are observed:

Red Cluster

The red cluster consists of 13 "barrios porteños" grouped in the cost profile of the city with the exception of the Mataderos barrio. This group has a total of 1485 Cultural Spaces.

The common features that share these barrios are Libraries, Exhibition Spaces, Monuments and Historical Sites and Cultural Centers.

It is worth mentioning the Palermo district with 52 Cultural Center and 52 Exhibition Spaces from which 13 are museums and 39 are Art Galleries, the largest number



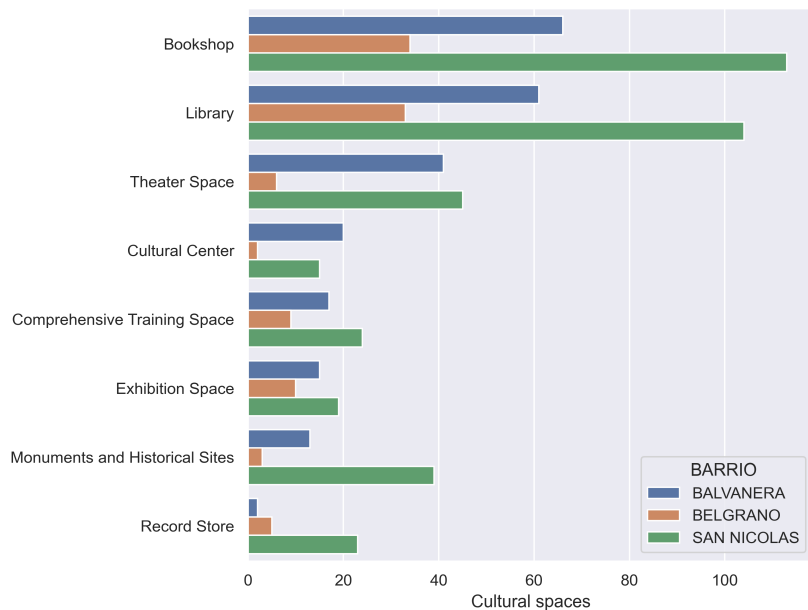
of galleries for a total of 168 galleries distributed throughout the city. The maximum number of libraries in the cluster has the Monserrat neighborhood with 75 venues. Monserrat also has 23 museums, the second largest city for a neighborhood.

The Recoleta Barrio also stands out, its main attraction is the Monuments and Historical Sites that have a total of 106 venues that are around the third part (34%) of the total of the city. In Recoleta the mayor of museums meets a barrio with 25 of 176 of the total city. Also in Recoleta there are 56 University and Technical Scientific Libraries representing 22% of the total.

Orange Cluster

The orange cluster consists of 13 porteños barrios with 8 barrios concentrated in the northwest area of the city. This group has a total of 1075 Cultural Spaces and shares common features in both Libraries and Bookstores.

San Nicolas owns 41 Specialized Governmental Libraries of the 153 that exist in the city, a 27%, and the second largest number of theaters with 39 theaters.



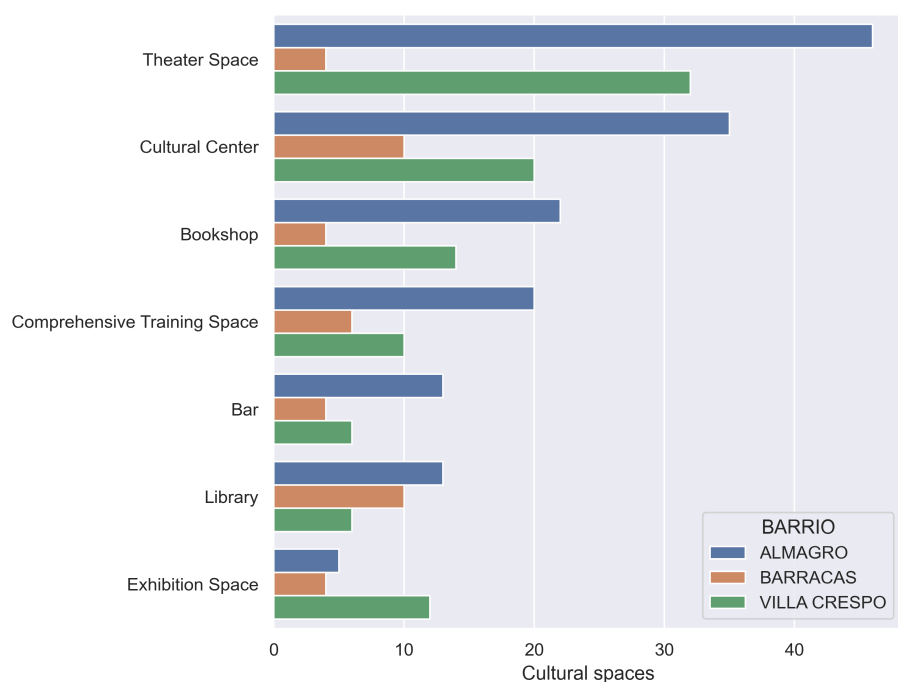
The most distinguished barrio of this group and that represents literature in the city is San Nicolas neighborhood with 104 Libraries and 113 Bookshop for a total of 217 venues dedicated to literature, which represents the fifth part (18%) of the venues dedicated to literature throughout the city.

Green Cluster

The green cluster has 22 Buenos Aires neighborhoods concentrated in the southern part of the city.

The green cluster has 696 Cultural Spaces. The main characteristics shared by these neighborhoods are Theater Space and Cultural Center.

The most prominent neighborhood in this cluster is the Almagro neighborhood, which has the largest number of theaters: 41 out of 275, 15% of the city.



Discussion

In the analysis of the clusters, using the k-mean method, fundamental and sufficient characteristics are revealed in the neighborhoods to answer the questions posed at the beginning of the report.

On What is the greatest cultural attraction of the city of Buenos Aires? Has an obvious answer, in fact the orange cluster is dedicated to this purpose, which is Literature, of the 3199 total cultural spaces, 1222 are dedicated to Literature (Libraries and Bookshop), this represents about 40% of the total cultural spaces.

The methodology that was applied responds in itself to the second question posed, What neighborhoods or groups of neighborhoods offer the best alternative for a group of tourists in terms of culture? In the results, 3 groups of neighborhoods are discussed to offer to tourists according to their preferences, the groups are:

Theater Space and Cultural Center

Mainly in the neighborhoods of **Almagro**, **Barracas** and **Villa Crespo** and they have theaters, a live music club, amphitheatres, open-air theater, milongas, tango clubs, cultural bars and peñas.

Exhibition Spaces and Monuments and Historical Sites

They take place in the neighborhoods of **Montserrat**, **Palermo** and **Recoleta** and have museums, art galleries, commercial galleries, and guided visits to historical sites.

Libraries and Bookstores

Mainly in the neighborhoods of **Balvanera**, **Belgrano** and **San Nicolas**, it also has Libraries of all kinds such as Scientific-University, Government or Business Specialized Libraries, popular, school, community, artistic, union and historical Libraries.

Conclusion: City of literature

Book stores abound in the city, in all Buenos Aires neighborhoods, about 40% of the cultural spaces reported by the Government of the City of Buenos Aires are dedicated to Literature, Buenos Aires has long been considered an intellectual and literary capital of Latin America and the Spanish-speaking world [4]. Literary production abounds in the city as well as people who are willing to buy it, not only mainstream literature, but also literature from independent and self-managed publishers. The second-hand book market is found in various parts of the city, in the heart of parks such as Rivadavia or Centenario Park and in cultural fairs such as the San Telmo fair on Defensa Street.

Considering the 1,222 spaces dedicated to literature and the estimated population of Buenos Aires as of 2020, it is obtained that there are an estimated 40 spaces dedicated to literature per 100,000 inhabitants, higher than world cities such as Paris or London and New York.

References

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