Capstone Project – The Battle of the Neighborhoods – Presentation–(Week 2)

A SIMPLE VISION OF BUSINESS IN CÓRDOBA ARGENTINA.
HOW TO SEE FROM ABOVE?

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INTRODUCTION

When we try to start something new, our minds are full of ideas to enter the most profitable business possible.

The world economy is in a very delicate state, which limits the purchasing power of certain sectors and hinders the entrepreneur's path.

Analyze 5 key areas of the city of Córdoba Argentina It will help those interested to have a broad overview of the most relevant categories for investment.

This will help to improve many aspects of the decision-making process and will provide a great deal of knowledge so that you can plan business success using it as information or simply to implement our business idea.

● Córdoba is located in the central region, on the banks of the Suquia River. It is the second most populous city in Argentina after Buenos Aires and the largest in the country and is an important cultural, economic, educational, financial and entertainment center in the region.

● With the geographic and demographic information extracted from the research,we will have a generalised picture of the preferences and opportunities in different parts of the city.

What is the best option to consider? What types of categories dominate the market? Which places are the most preferred? What type of place prevails over time?

ABOUT DATA

The data to be used is freely available, we will trust the wikipedia from which the information will be extracted to obtain a data framework with the information of the neighborhoods of Córdoba Capital.

With all this information we will proceed to extract the relevant information for the investigation and thus be able to graphically represent it with its real geographical location and be able to analyze the different sectors within a radius of up to 500 meters from the point of origin of each area.

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The coordinates of Cordoba Capital will be obtained using the geocoding of the GeoPy library, as well as the research areas will be obtained using the inverse geocoding of the GeoPy library.
Information on business categories in a 500 meter range, their type and location in each neighborhood will be obtained using the Foursquare API.
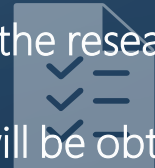
ANALISYS | METHODOLY
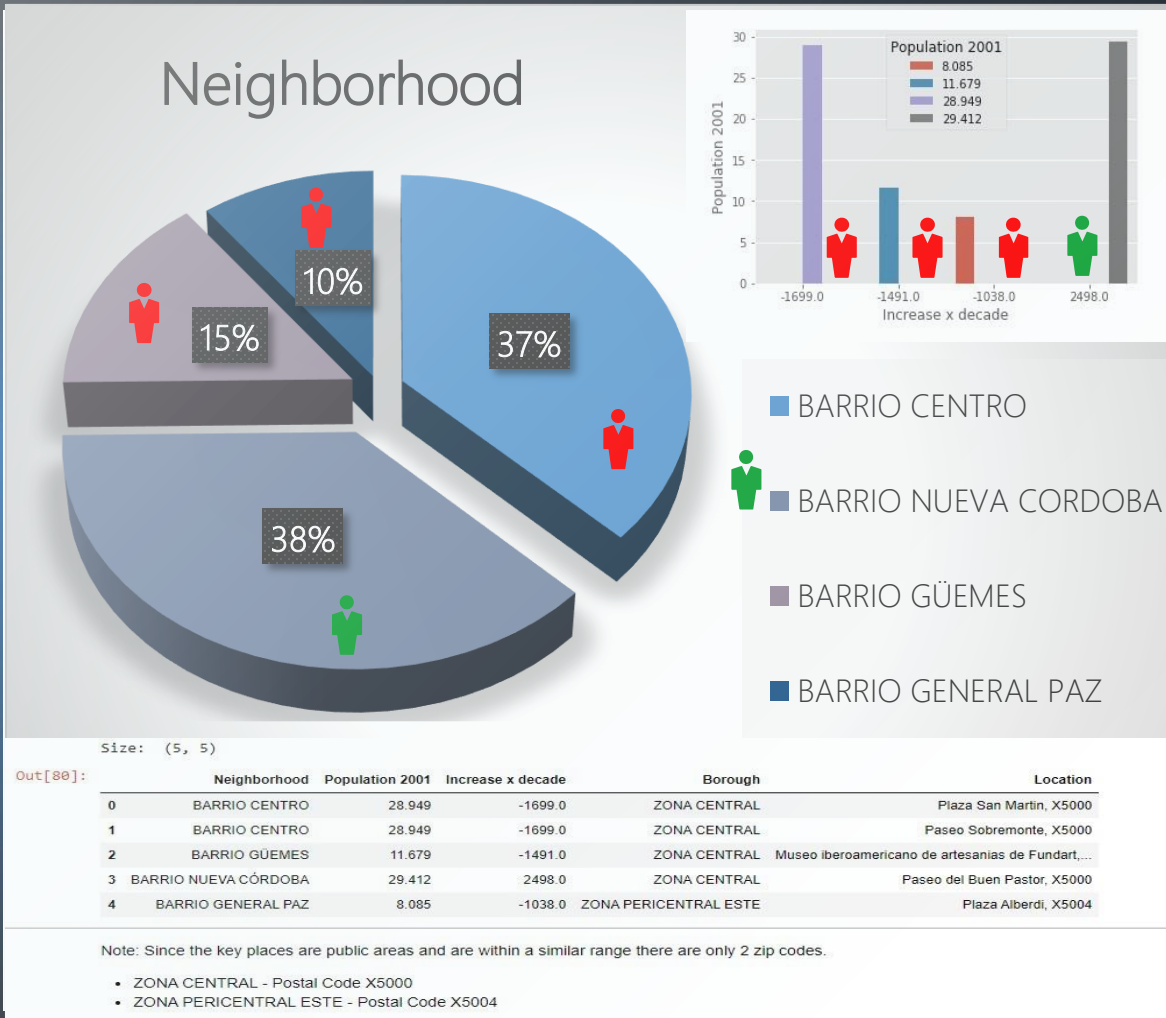
We will start by extracting the data from the wikipedia by the data scraping method, which will filter the most relevant information to represent, 5 selected key locations.

We will understand the proportion of the population that lives in the neighborhoods according to information from a census conducted in 2001, and we will be able to compare their percentage of growth measured in decades.

We will obtain their coordinates to be able to geolocate them and represent the neighborhoods on the map, to create the 5 points of interest and based on each point, within a radius of 500 meters, filter the most frequent places to establish a framework of informative data, which will be analyzed and discussed for understanding.

Finally we will segment it by means of clusters to devise different paths and conclusions to follow. creating groups (using k-means grouping) will try to optimize the distances between the 5 zones and be able to determine which categories are most important by grouping them according to this method.

For the development of the project we used the Fundamental Methodology for Data Science.

GEOLOCATION – Córdoba Argentina

Using information from wikipedia's filtered data frame, geographic coordinates are extracted and new information is added to the data frame for further exploration and analysis.

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Out[17]:

	Neighborhood	Population 2001	Increase x decade	Borough	Location	Address	Latitude	Longitude
0	BARRIO CENTRO	28.949	-1699.0	ZONA CENTRAL	Plaza San Martin, X5000	(Plaza San Martín, Centro, Córdoba, Municipio ...	-31.416735	-64.183580
1	BARRIO CENTRO	28.949	-1699.0	ZONA CENTRAL	Paseo Sobremonte, X5000	(Paseo Sobremonte, Centro, Córdoba, Municipio ...	-31.415514	-64.192101
2	BARRIO GÜEMES	11.679	-1491.0	ZONA CENTRAL	Museo iberoamericano de artesanias de Fundart,...	(Museo iberoamericano de artesanias de Fundart...	-31.423827	-64.192175
3	BARRIO NUEVA CÓRDOBA	29.412	2498.0	ZONA CENTRAL	Paseo del Buen Pastor, X5000	(Paseo Del Buen Pastor, Buenos Aires, Nueva Có...	-31.424083	-64.186420
4	BARRIO GENERAL PAZ	8.085	-1038.0	ZONA PERICENTRAL ESTE	Plaza Alberdi, X5004	(Plaza Alberdi, General Paz, Córdoba, Municipi...	-31.414336	-64.170391

Out[88]:

FOURSQUARE API

According to the points of interest, the information will be filtered in a radius of 500 mts , it will be loaded in a Json file and it will be transformed in a data frame to be able to work it.

The API information will be filtered and we will keep the most relevant information forming a new data frame to explore its categories.

Total Categories
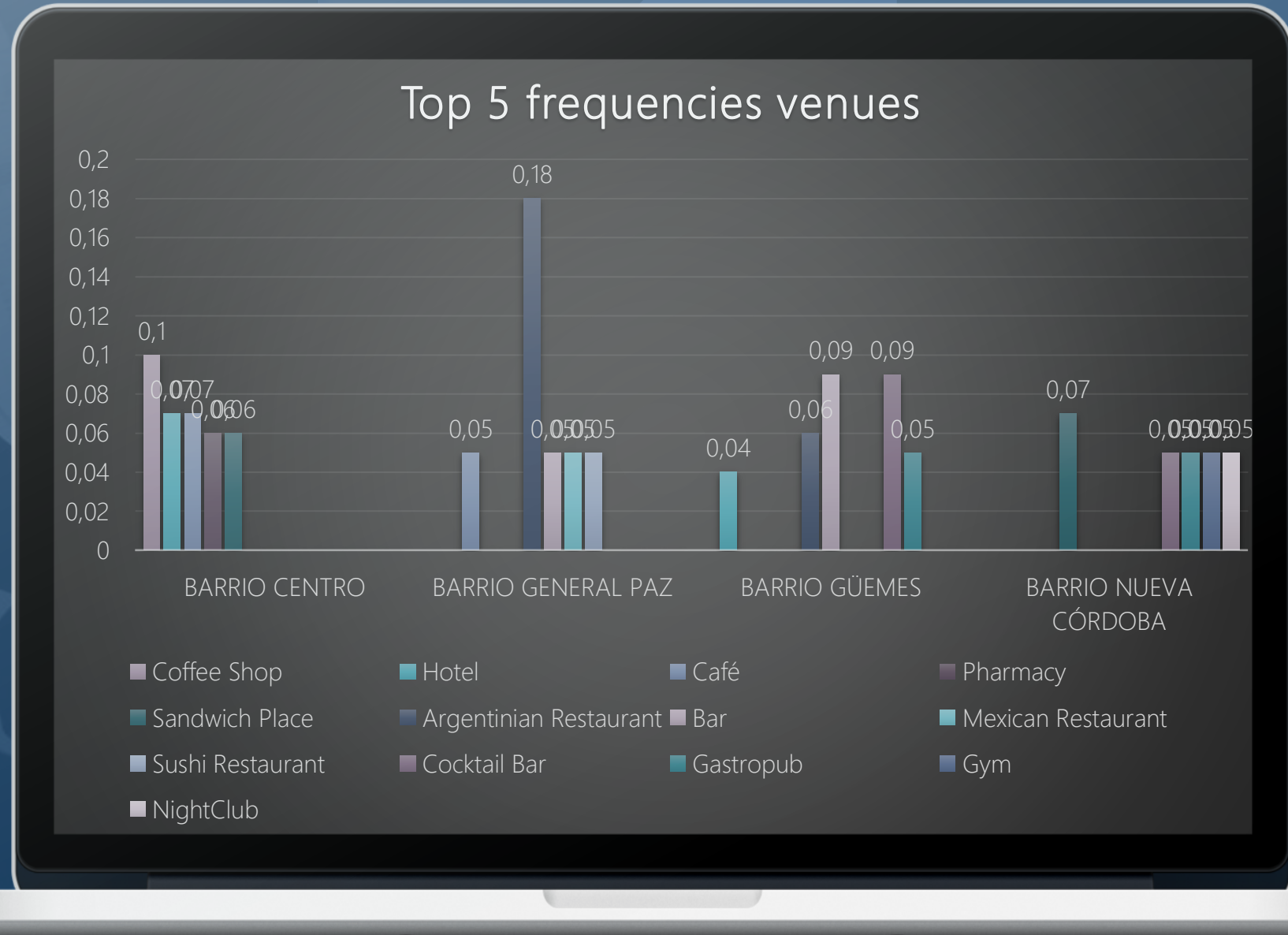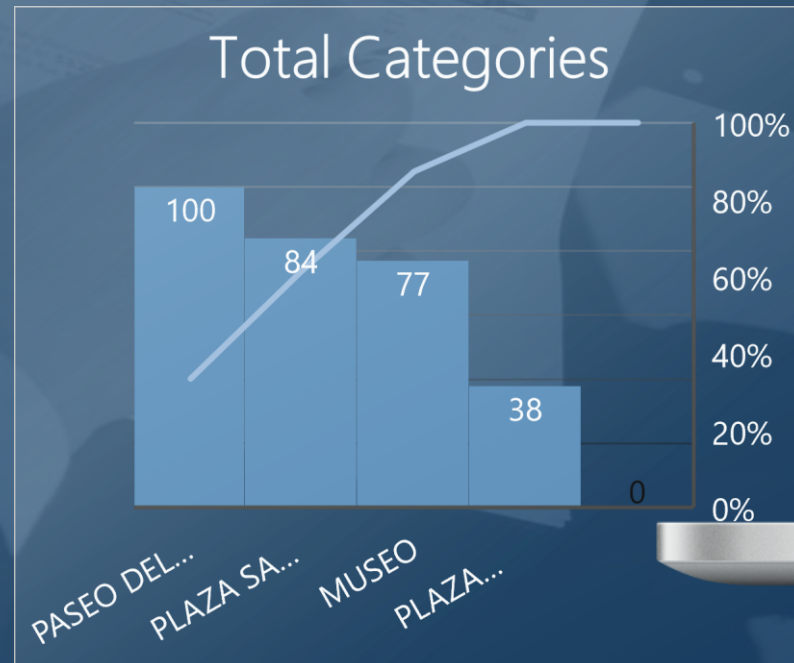
Top 5 frequencies venues

Top 10 venues

(4, 11)

Out[28]:

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	BARRIO CENTRO	Coffee Shop	Café	Hotel	Pharmacy	Sandwich Place	Argentinian Restaurant	Fast Food Restaurant	Diner	Plaza	Ice Cream Shop
1	BARRIO GENERAL PAZ	Argentinian Restaurant	Mexican Restaurant	Ice Cream Shop	Café	Sushi Restaurant	Bar	Restaurant	Park	Cocktail Bar	Middle Eastern Restaurant
2	BARRIO GÜEMES	Bar	Cocktail Bar	Argentinian Restaurant	Gastropub	Bakery	Hotel	Sandwich Place	Nightclub	Brewery	Beer Garden
3	BARRIO NUEVA CÓRDOBA	Sandwich Place	Cocktail Bar	Nightclub	Gym	Gastropub	Argentinian Restaurant	Fast Food Restaurant	Café	Hotel	Bakery

Run k-means to cluster the neighborhood into 4 clusters.
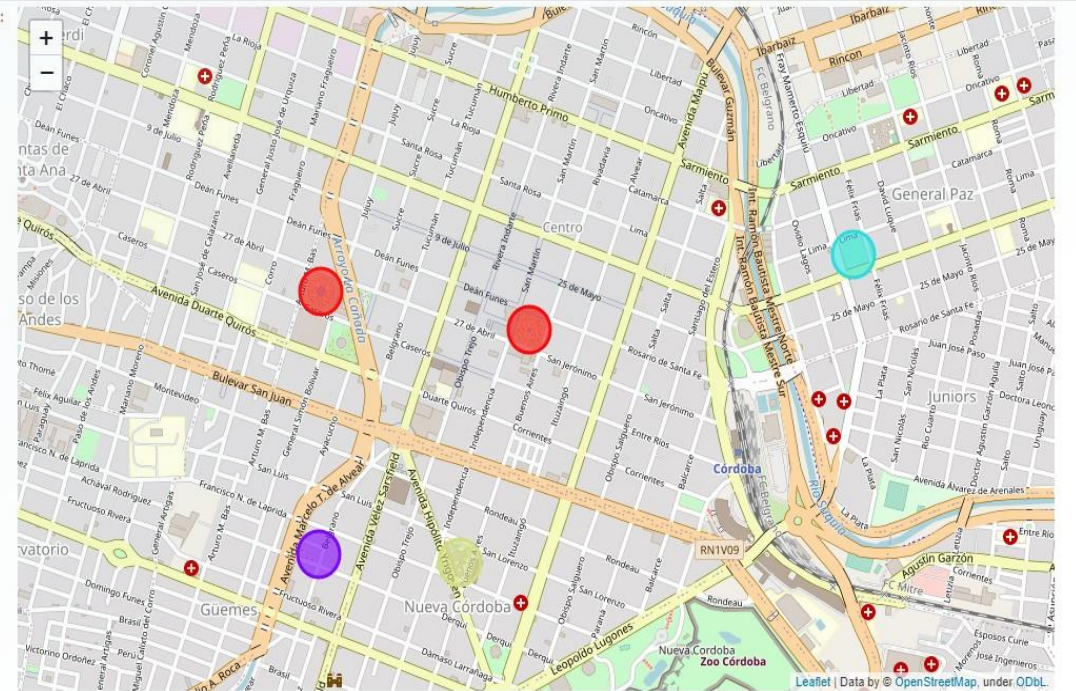
Results & Discussion

BARRIO CENTRO

The analysis shows a greater demand for cafeterias and hotels, leaving the houses of Argentine food or some snack or fast food in a fourth place; in the central area investigated, two green spaces with a lot of social movement stand out, which are the San Martín Square located next to the town hall and the cathedral church (historical symbol), the other place is the Sobre-monte walk, a place very close to public work entities such as provincial courts of justice, surrounded by a lot of cultural movement.

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It is quite clear that for these two locations the cafeterias or lodging places predominate since the movement is very varied people who live here eat in other places and those who do not live here are just passing through.

BARRIO GÜEMES

This is a well-known sector of the city of Córdoba, where it is very popular with visitors or natives of the province. The area studied is an area of immigrants from many different cultures, and there are many different activities such as shows, crafts, food, beer ... As for the most popular categories, according to the results, cafeterias with drinks and fast and regional food predominate.

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In the last years the commerce was growing in many categories and many areas close their streets and become pedestrian during the weekends so that the great flow of people can transit, walk and consume. The place has lately become fashionable for breweries and night clubs.

BARRIO NVA CÓRDOBA

One of the most dynamic sectors of Cordoba's economic, cultural and recreational life. Very popular with students and with a high increase in population growth. The categories that epredominate are the houses of sandwiches or fast food, gym night clubs and houses of drinks.

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The nightlife is very busy in this area as it is overcrowded with many students. It is an area close to the university city. Young people prefer the night, fast food and exercise

BARRIO GRAL PAZ

Is a neighborhood that was developed in the mid-nineteenth century. It has a lot of social movement and it is one of the most frequented for the gastronomic movement, the international Argentine food covers the biggest frequency of interests, there is a lot of variety of ice cream shops and bars.

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It is a neighborhood near the government house, with a lot of history and gastronomic movement.

Conclusion

The purpose of this project was to identify the most frequent categories by people in 4 areas with 5 specific places with a lot of socio-cultural movement, in order to provide information about the category movement to the person who is starting it or by way of information as a tool to improve decision making. The final decision on the best categories or places may vary according to the investigated area and the desired heading, the precision can be improved by changing the code by replacing the values of interest based on the specific characteristics of the neighborhoods and the locations in each recommended area.

THANK YOU

THE END