Applied Data Science Capstone

Battle of Neighborhoods: Buenos Aires

Problem Description

▶ People in Argentina like good gastronomic quality. Going to restaurants and sharing a meal among friends and family, spending a whole afternoon chatting while enjoying a post-meal coffee is one the most Argentina traditions of all time. For this reason restaurant are a big deal.

▶ With this in mind, a Chef who lives in Buenos Aires, Argentina, has won a cooking competition and received some price money to set up his Restaurant. However he is not sure where he can set it up.

▶ The goal of the project is to select an optimal location for his new restaurant.

  ▶ How many venues in each neighborhood?

  ▶ How many categories in neighborhood?

  ▶ How many venues in each neighborhood?

  ▶ What are the most popular categories in each neighborhood?

▶ Also it is important to mention that the price is to build the "Restaurant of your dreams Prize" and the chef has an unlimited budget.

Data used

- To find the answer to this questions we will be using public available data to answer question that can lead us for best possible location for the restaurant.

  - **1. List of Neighborhoods of Buenos Aires**

  - **2. Lists of Food Venues in Buenos Aires**

  - **3. Socio-Economic data of Buenos Aires**

- Data description

  - *List of Neighborhoods of Buenos Aires:*

    - A list of all neighborhoods will allow us to understand the different areas of the city where the restaurant can be set

  - *Food Venues*

    - It is important to understand what other types of restaurants are out there so as not to create a price war against incumbent venues

  - *Socio-Economic Data*

    - This data will allow us to learn in what areas of the city has higher income and have an idea where would it be more suitable to put the restaurant
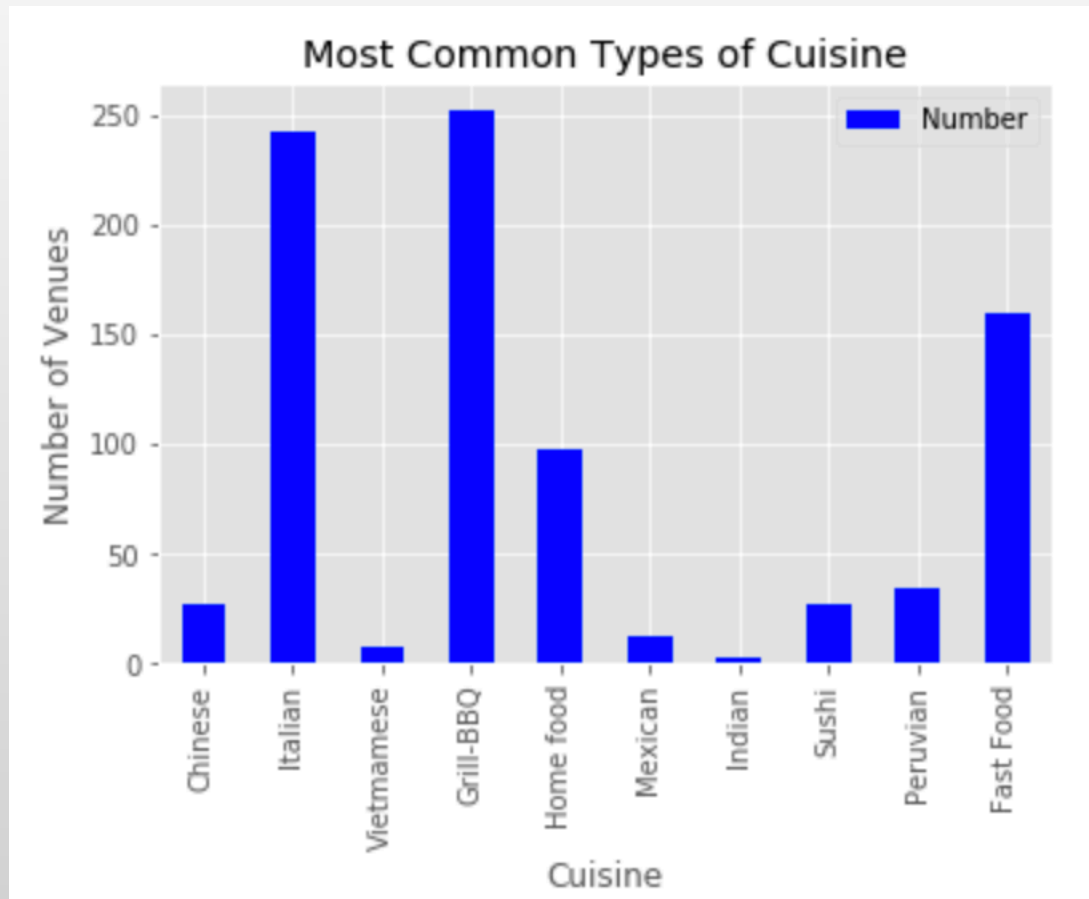
Snapshot of main data frames

	Name	Area in km2	Population	Avg Income
0	Almagro	4.1	128206	46150
1	Barracas	7.6	73377	41200
2	Belgrano	6.8	126816	87200
3	Boedo	2.6	45563	62450
4	Caballito	6.8	170309	65300
5	Flores	7.8	142695	34750
6	La Boca	3.1	43413	35000
7	La Paternal	2.2	19058	32750
8	Liniers	4.3	42083	36600
9	Mataderos	7.3	62206	35000

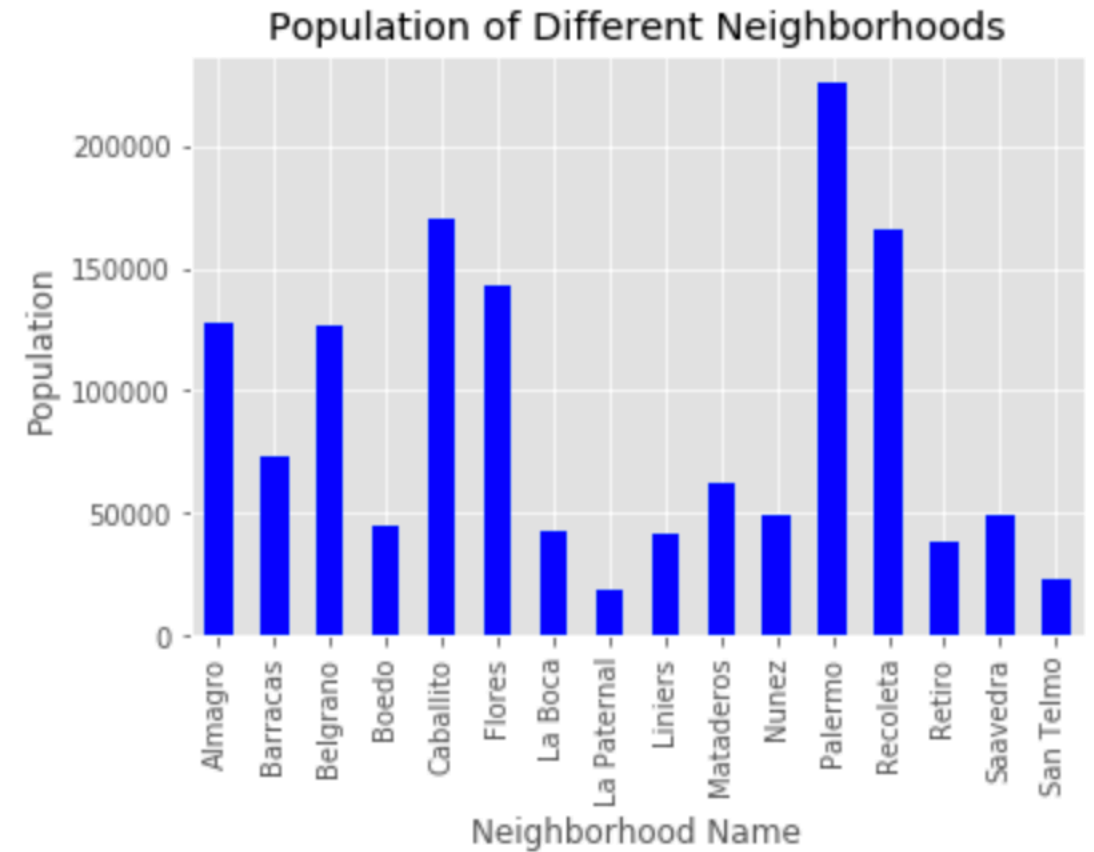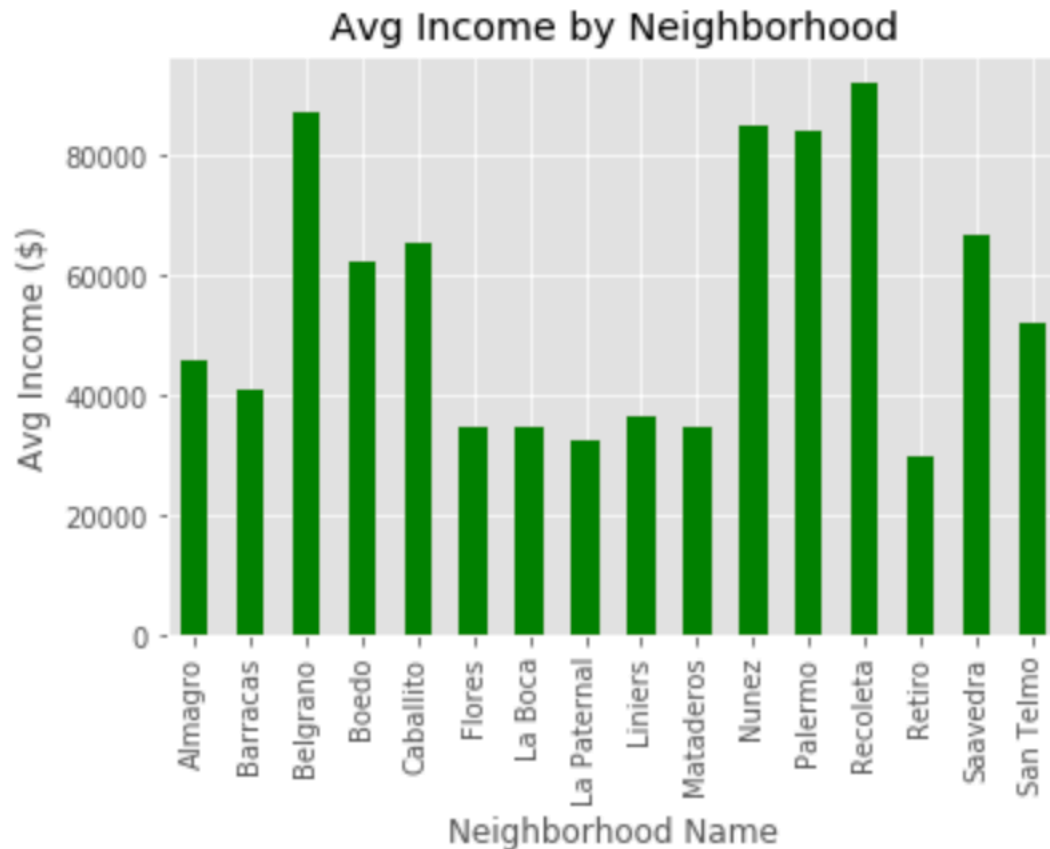|	Restaurants	Number
0	Chinese	27
1	Italian	242
2	Vietmamese	7
3	Grill-BBQ	252
4	Home food	97
5	Mexican	12
6	Indian	3
7	Sushi	27

Types of Cuisine

Most Common Types of Cuisine

We can see that the Italian and Grill/BBQ cuisines are very predominant against other cuisines, like Indian, Sushi or Vietnamese.

Fast food has a relevant share, but still cannot compete against the top 2.
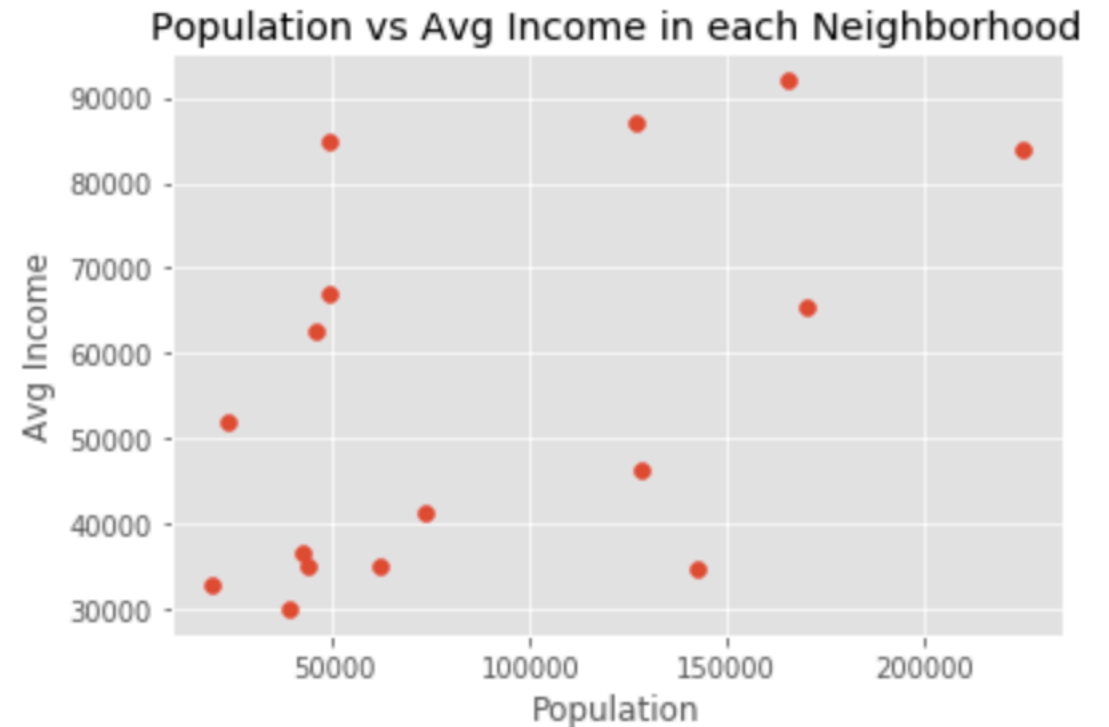
Socio-economic factors

We can see that Belgrano, Recoleta, Nunez and Palermo have the highest avg income, and a fair larger population than the rest.

Scatter plot: Population vs Avg Income

We can see that in the avg income is higher in more populated neighborhoods.

Moreover, Football/Soccer is a very popular sport and people go to the stadiums every weekend to see their Team. The Chef would like his restaurant to be located close the the Biggest football stadium, this being River Plate's Stadium with a capacity of over 70k spectators. Around this area there is an enormous amount of foot traffic and potential customers during the weekend. This happens to be the Belgrano Neighborhood, with 127K people and $87,200 of avg yearly income
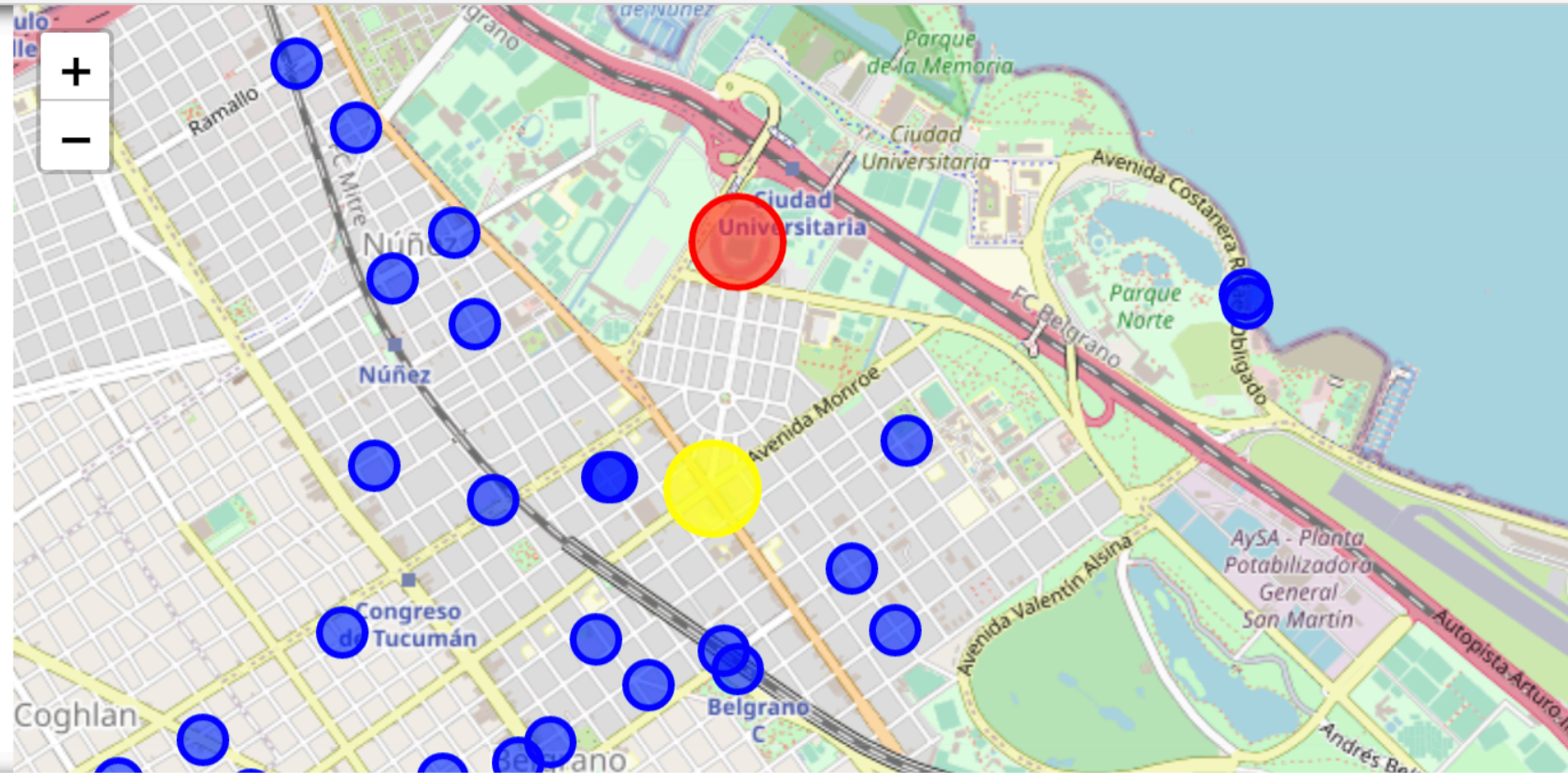

Population vs Avg Income in each Neighborhood

Nearby Venues in Four Square

Based on the map and the distribution of other grills around River Plate Stadium, we chose the best new location for the new restaurant that would be closest to the stadium and closest to main foot traffic areas.

The intersection of Av. Monroe, and Av. Libertador seems like an excellent place.


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[93]: # display map
       venues_map
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Out[93]:

Now, we can see in the map where the new restaurant shoud be located