

# Capstone Project - The Battle of Neighborhoods

This report belongs to the Final Assignment of the Course "Applied Data Science Capstone".

## Introduction/Business Problem

An investment group wants to set up a chain of gyms with a revolutionary concept in Andalusia. As part of their initial plan they want to locate their first headquarters in Seville (the capital) in a place where there are many gym users to be able to attract them.

## Data section

We need to collect data from all gyms in the city of Seville, including their name, identification, location (address, latitude, longitude) and then search for the "hot" neighbor where most of the place is located. For the purpose of data assets, we use FourSquare and apply folio to visualize a particular neighbor in which we will observe customer "traffic" and predict the proper location of the new gym in the city.

For that purpose we will use the Request "GET <https://api.foursquare.com/v2/venues/explore>" with the "query": "Gym".

Finally the searched location will appear on the folio map with the name "Lugar Buscado".

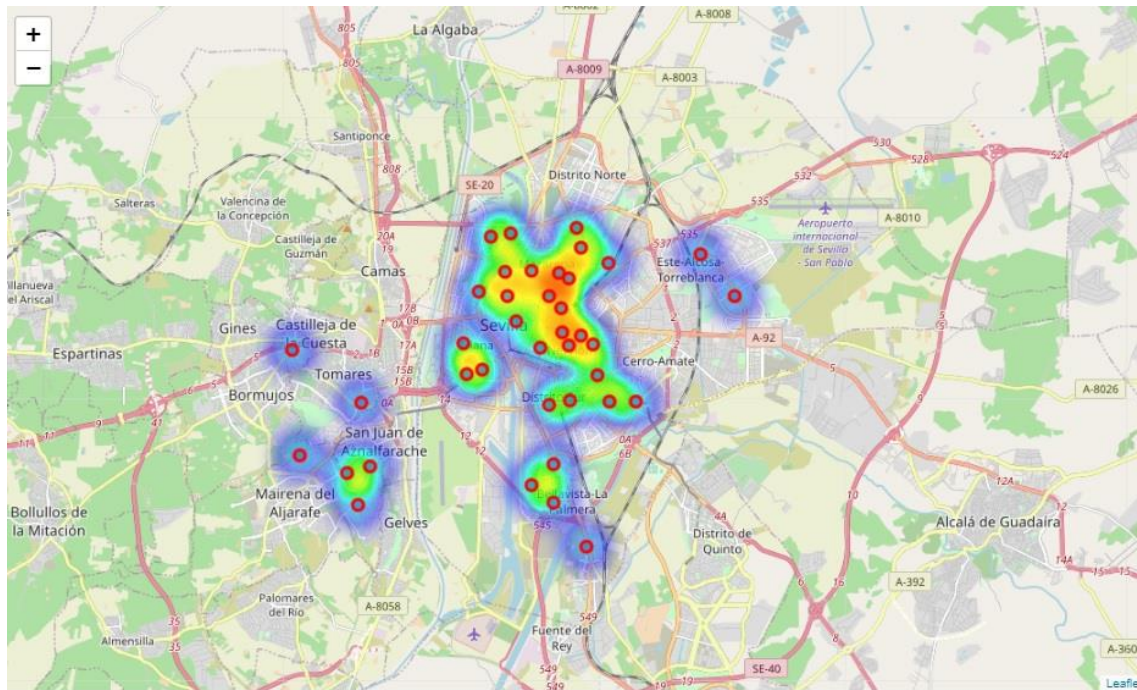
## Methodology section

We execute the following steps:

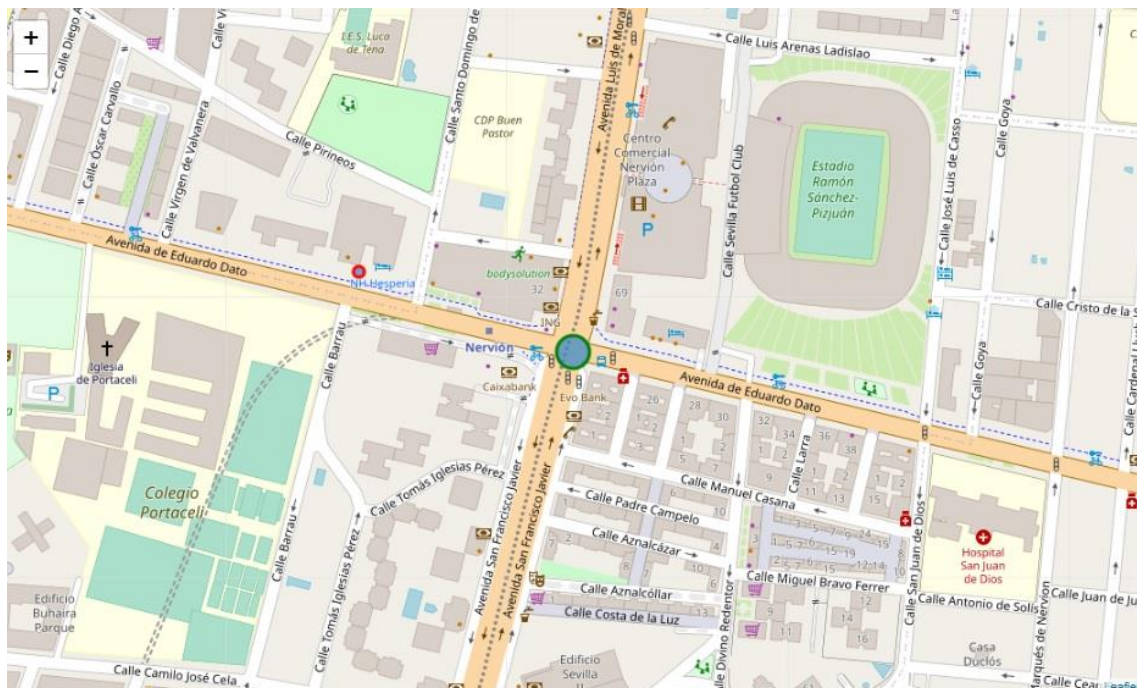
1. Transform data obtained into json then request geocode.
2. Create group including information which is recommended
3. Create items of objects related to "Gym" and their attributes
4. Test it by calling an item
5. From the output we can identify necessary factors of what we will use later to consider the probability of launching our up-to-coming location.
6. Get coordinates of Sevilla and create folium map which will help visualize what we have got from data.

# Results

Here is the map of Sevilla regarding the use of gyms



Finally we have found the appropriated place where to set the first headquarter of the new chain of gyms. It is located in the busiest area to attract new customers.



## **Discussion**

All the info related can be updated dynamically and it is advisable to carry out this update exercise since the gyms business is very volatile.

## **Conclusión**

We can conclude that the ideal location of the first headquarters of the gyms chain is located in a central area of the city and with a lot of customer presence.