

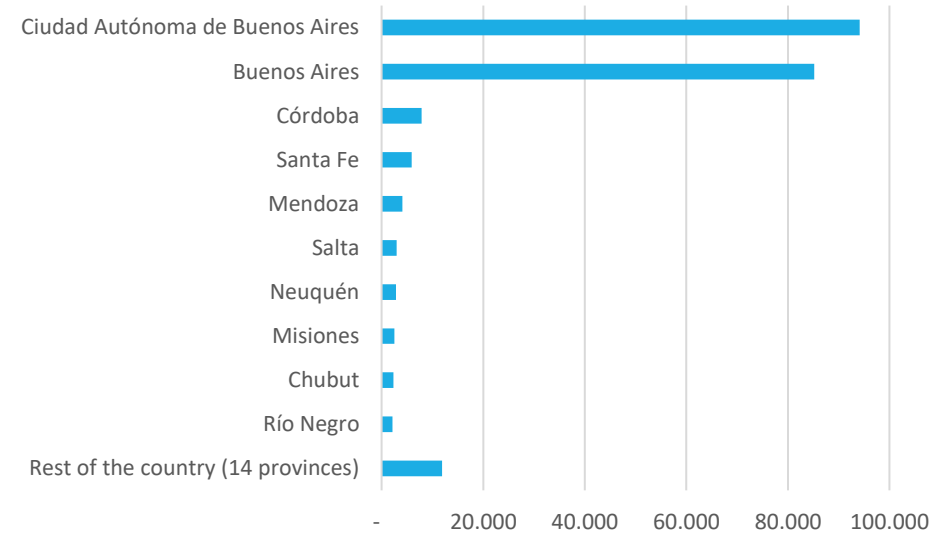
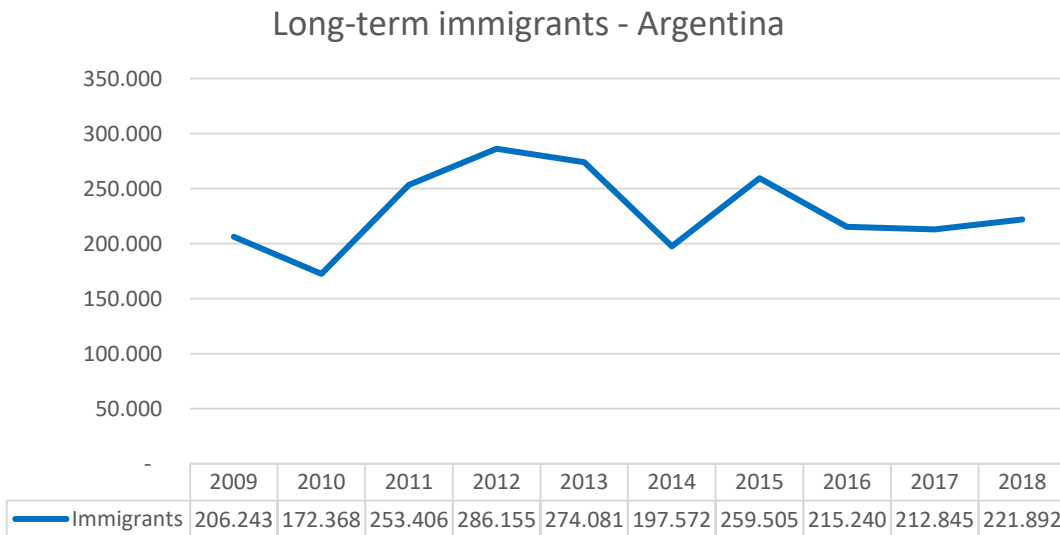
THE BATTLE OF NEIGHBORHOODS

IBM DATA SCIENCE PROFESSIONAL CERTIFICATE
CAPSTONE PROJECT REPORT

Leonardo Fernández

Introduction

According to the Ministry of Interior of Argentina, the average amount of long-term immigrants to the country for the last ten years is 230k, and around 80% of them are moving to the Buenos Aires Metropolitan Area



Why this project?

Moving to another city usually is a major change in people's life and a decision that should not be taken lightly. Signing a rental contract is a commitment for a long period of time and making a mistake could be costly to fix.

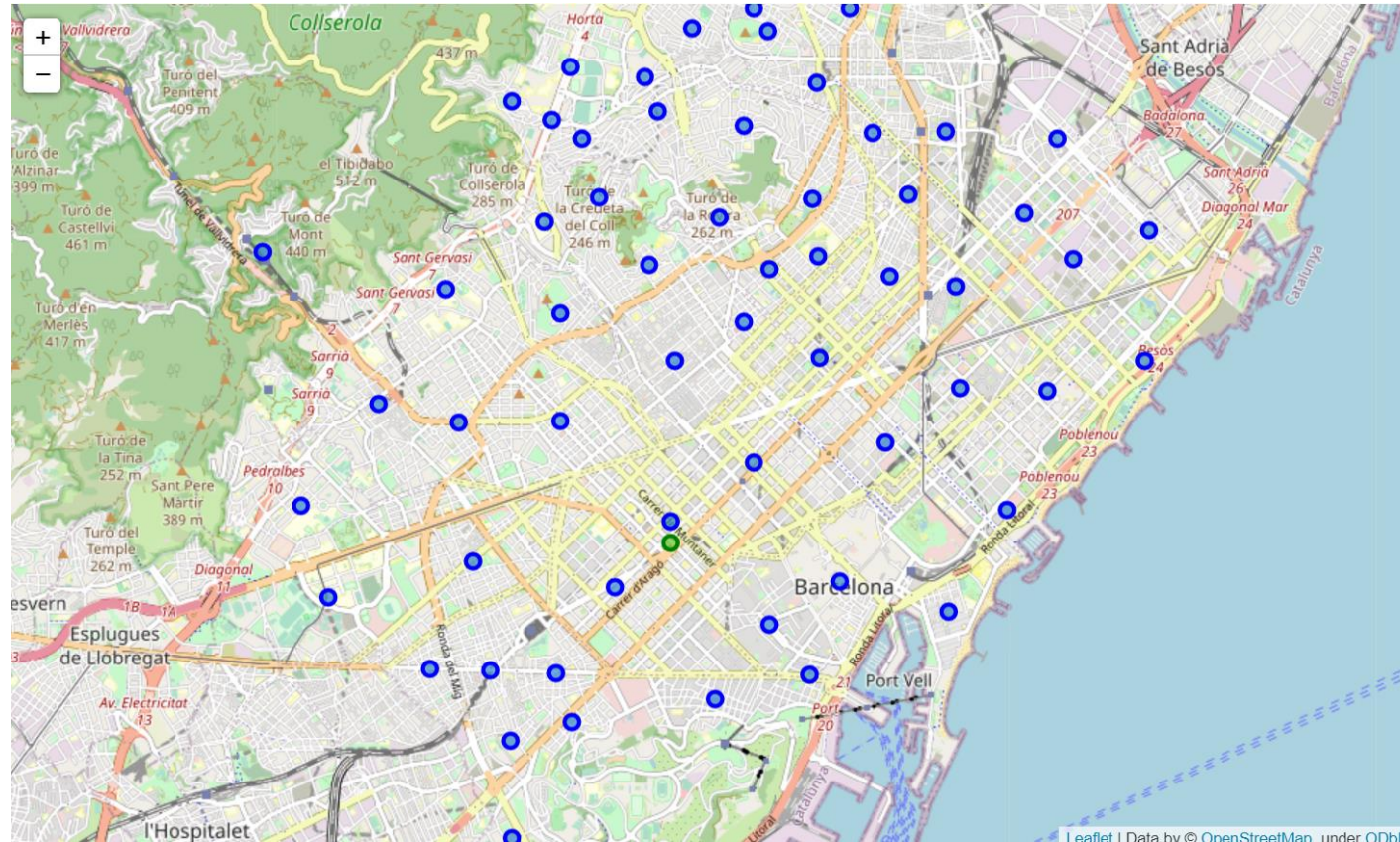
Characteristics and venues of the chosen neighborhood could affect habits and daily activities. In addition, every mayor city has zones safer than others, which might be unknown prior to moving to the new city. Finally, rental cost is one of the biggest monthly expenses that cannot be easily modified and therefore it can have a big impact in personal monthly budget.

Project objective

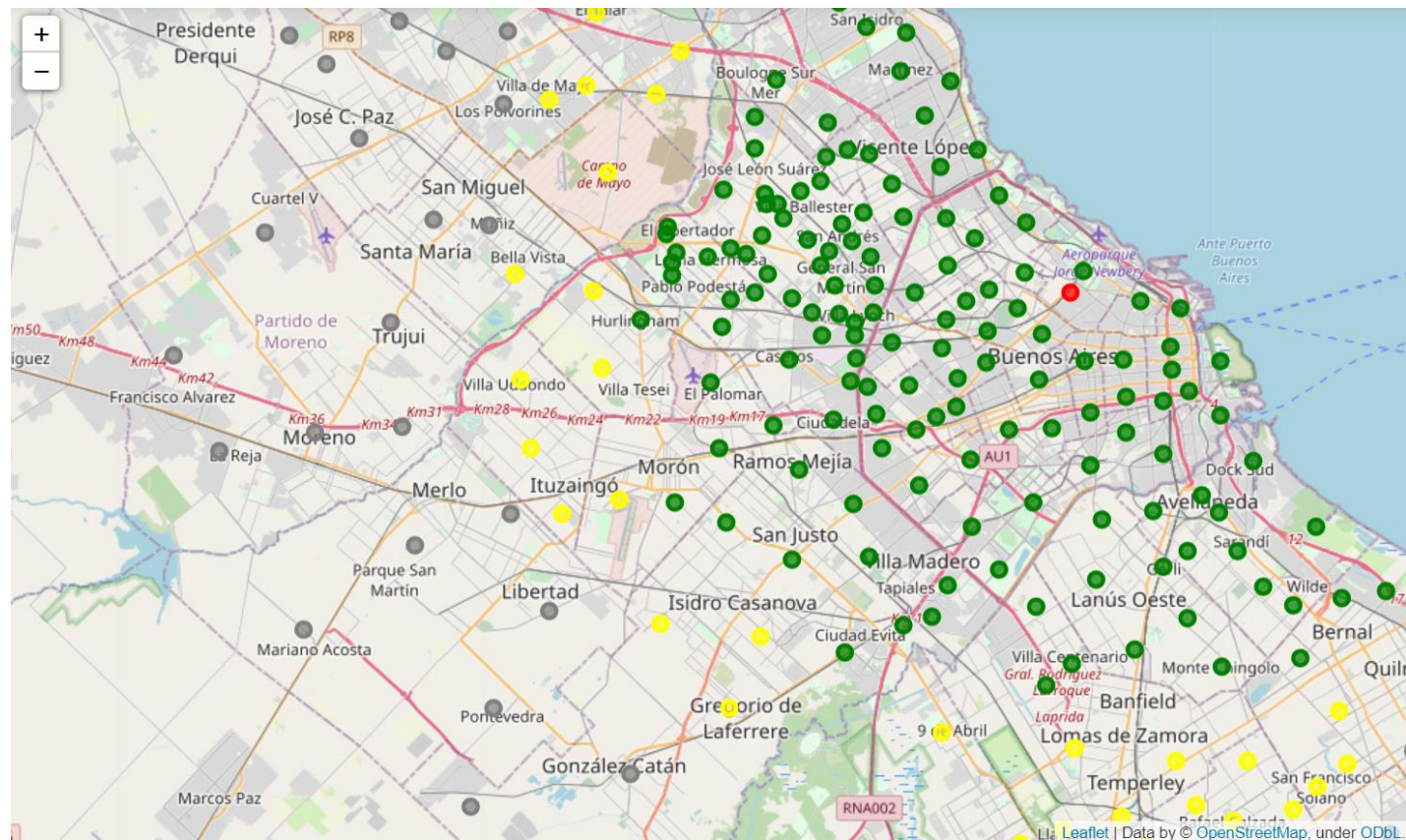
The aim of this project is to elaborate and analyze an algorithm capable of selecting the neighborhoods in a destination city that are most similar to the surroundings of an origin address according to venues in the area and population density, pick the 10 safest and predicting the rent value of an apartment or house.

A particular case of a person moving from Barcelona, Spain, to Buenos Aires, Argentina will be used as an example, but the technics and methods could be extrapolated to any different case.

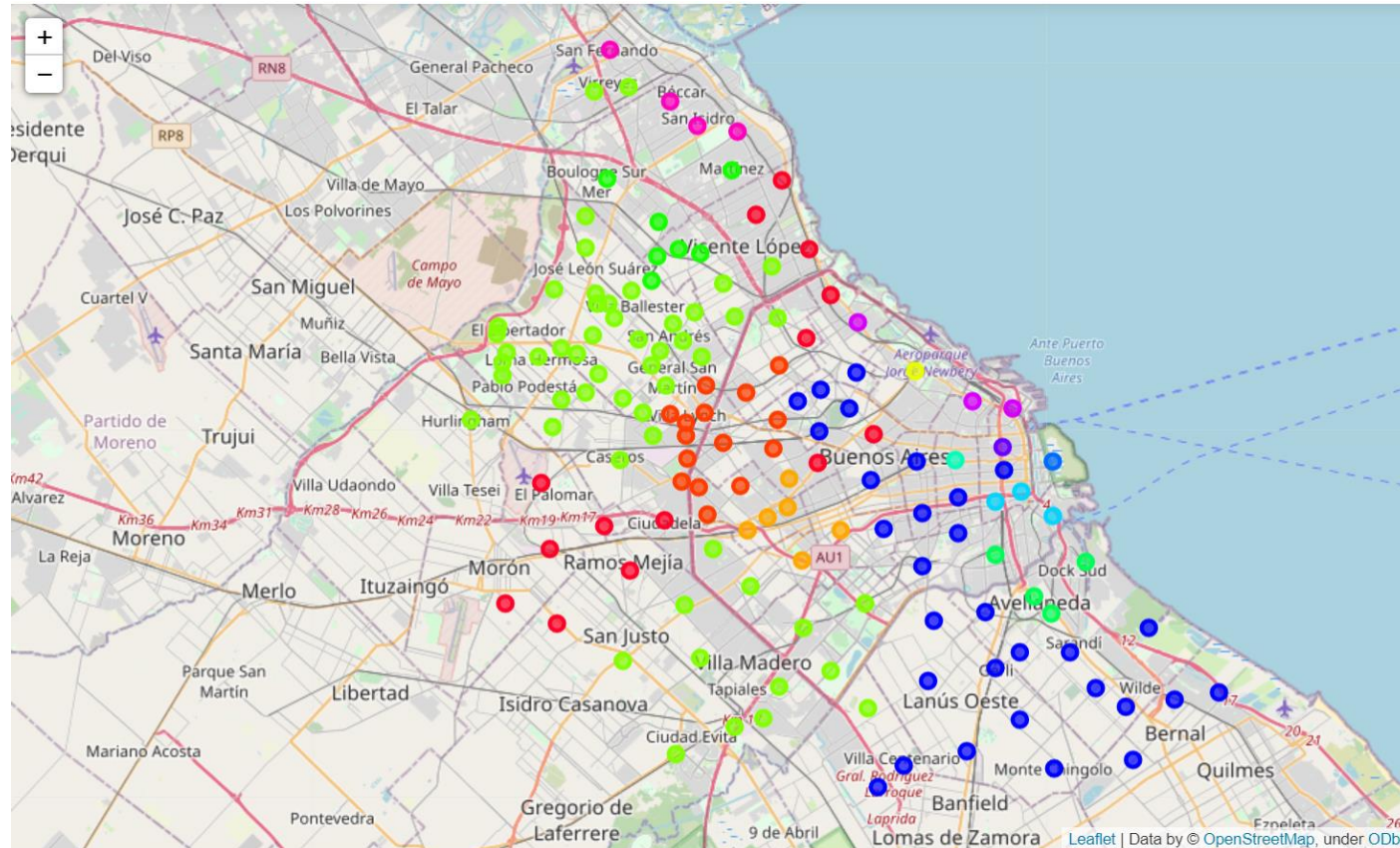
Barcelona



Buenos Aires

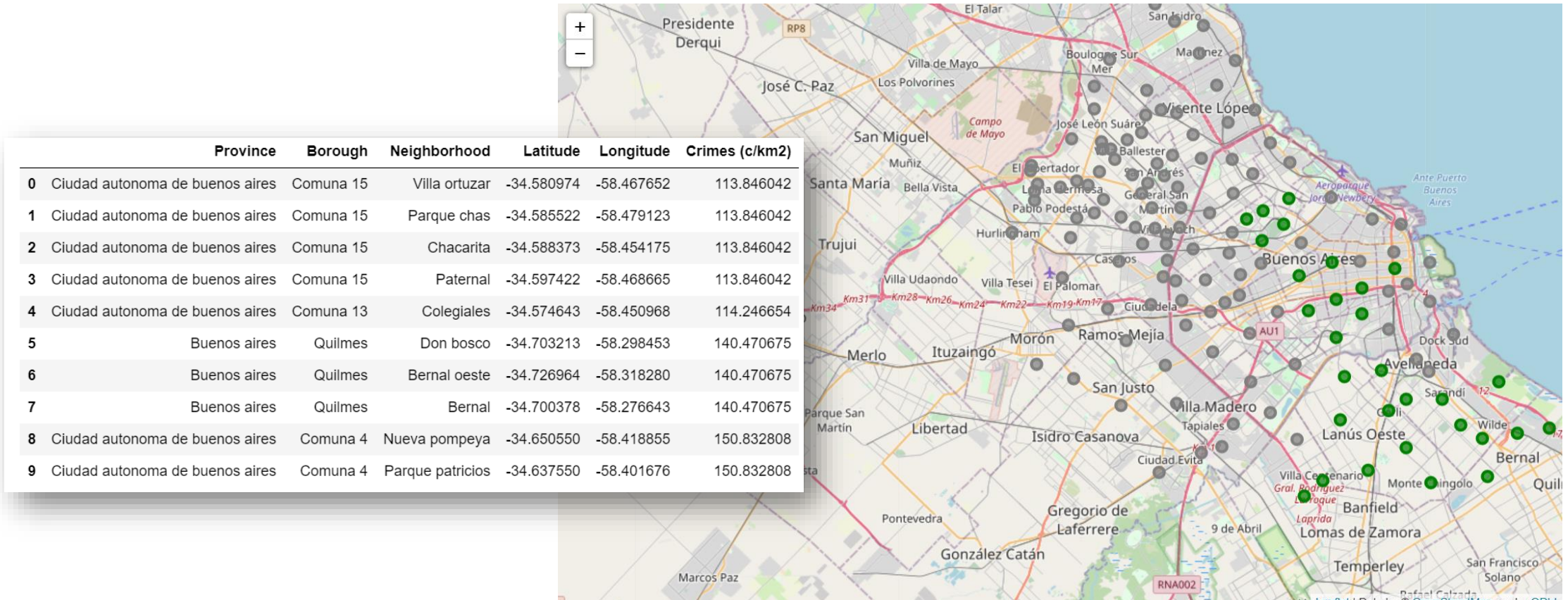


Analysis



Buenos Aires Clustered

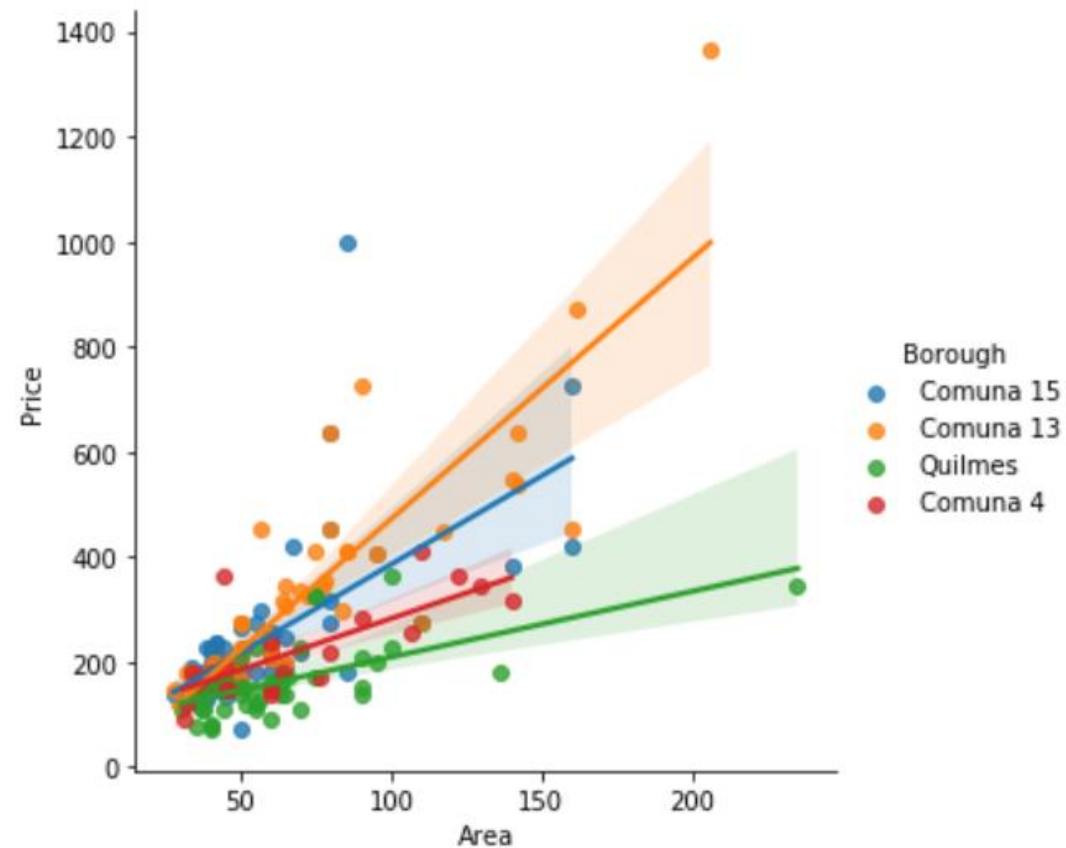
Analysis



Selected cluster

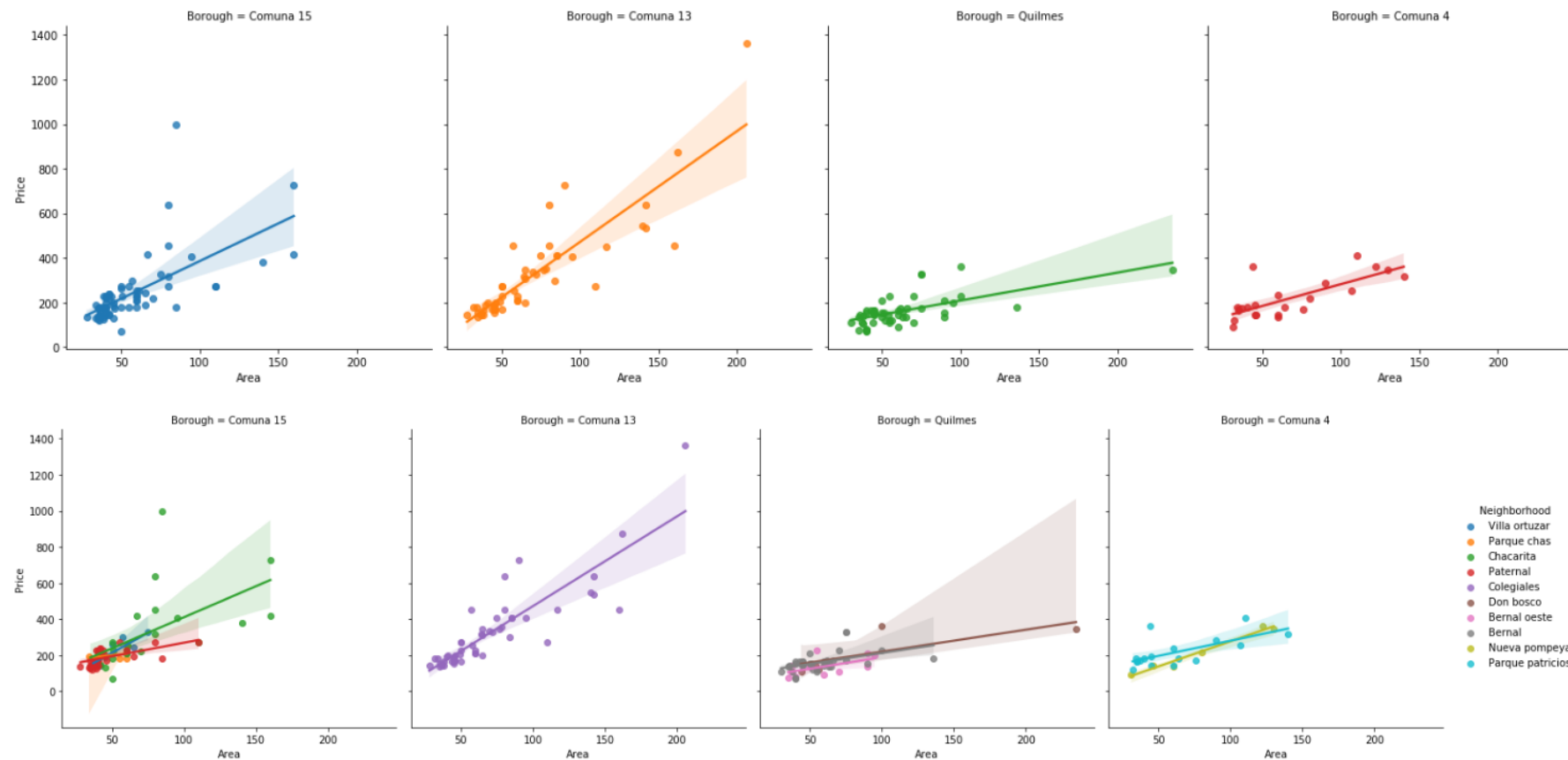
Results

House pricing in the selected cluster neighborhoods



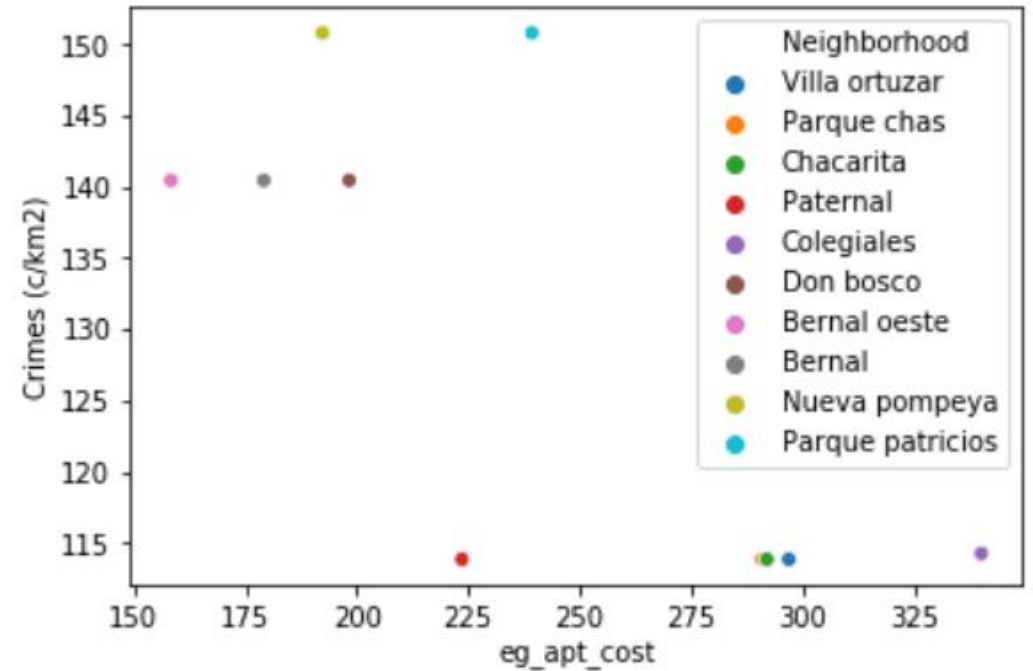
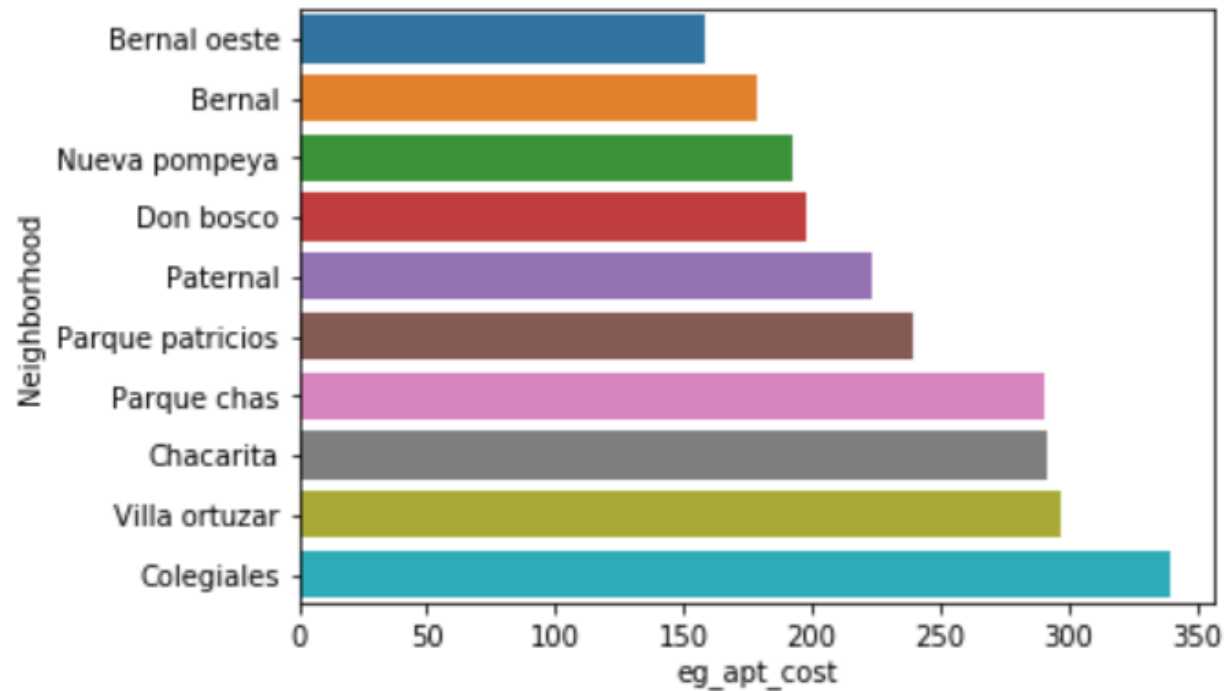
Results

House pricing in the selected cluster neighborhoods



Results

Price prediction



Conclusion

Despite some error due to low data samples, **this methodology has proven to be efficient in solving the proposed problem.**

For it to work properly we need:

- More house rental ads available
- Foursquare to be popular and widely used.