

Luxury goods store at Mexico City Borough

IBM – Coursera

Data Science Specialization

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Business problem introduction

- This business problem is part of the first part of the **IBM Data Science specialization**. The purpose of this capstone is to define a problem or an idea of my choice, where I would need to leverage the Foursquare location data to solve or execute. According to these criteria, I've decided to create a case described below.
- Find opportunities in the Mexican market for **Luxury Goods** is a task that we can achieve with the right Data Analysis. According to [statista.com](https://www.statista.com/statistics/263427/mexico-luxury-market-size/) the luxury market size in Mexico is about **US \$3.584 M**, one of the largest in Latin America.

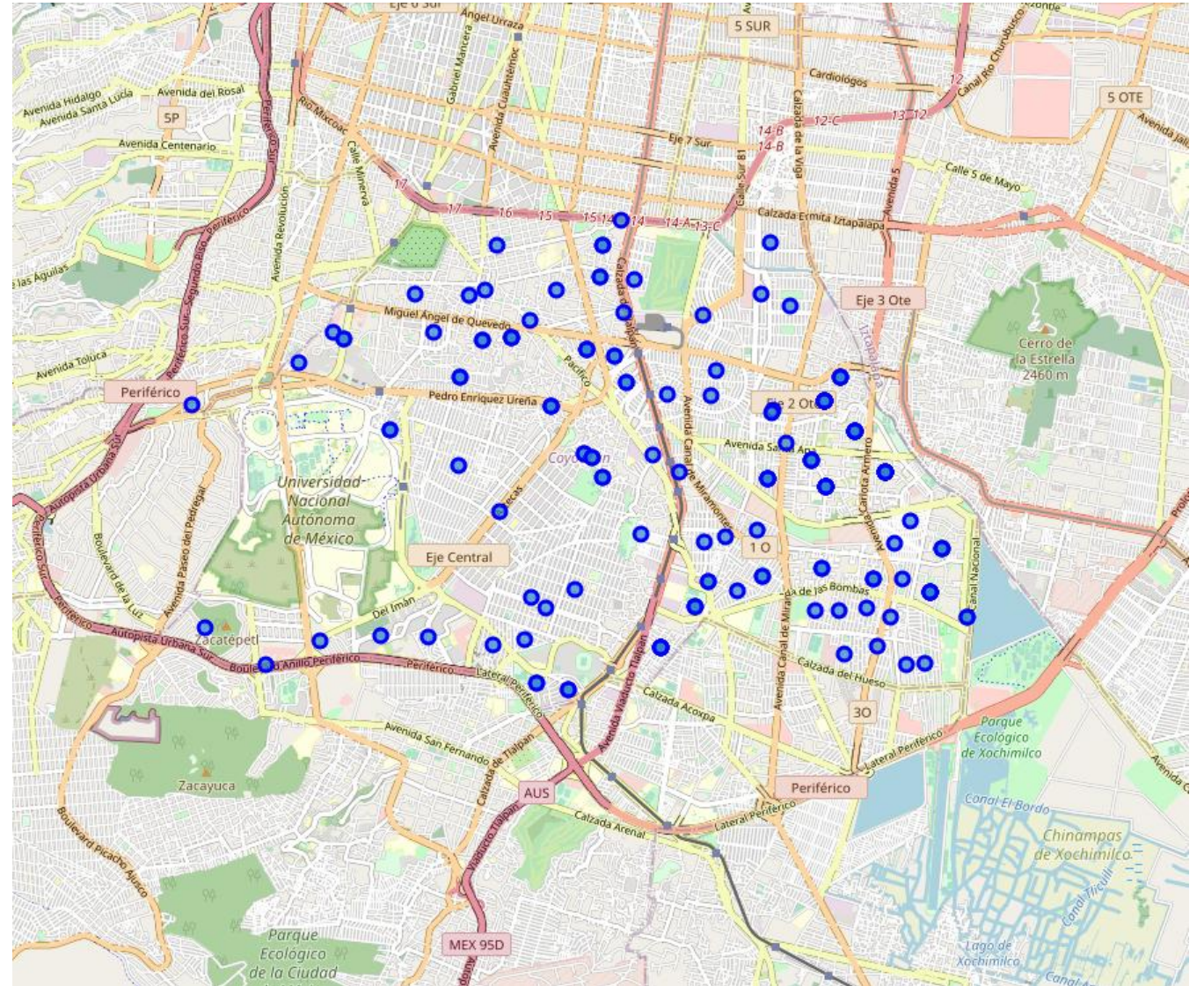
Business problem

- In Mexico City, a client / contractor is interested in knowing where to open a luxury goods store at Coyoacan borough of Mexico City, it is important to know the economic development of the neighborhoods, as well as to know the **10** businesses closest common to know the competition and preferences of the area to study in order to discover the right place to open a store to be successful

Data acquisition

- Data URL's:
- [Zip Code and neighborhoods from Mexico City](#)
- [Here API to know the neighborhoods location](#)
- [Social Development Index by neighborhood, Mexico City neighborhood](#)
- [Foursquare API to make an analysis of the venues nearest to the Neighborhoods](#)

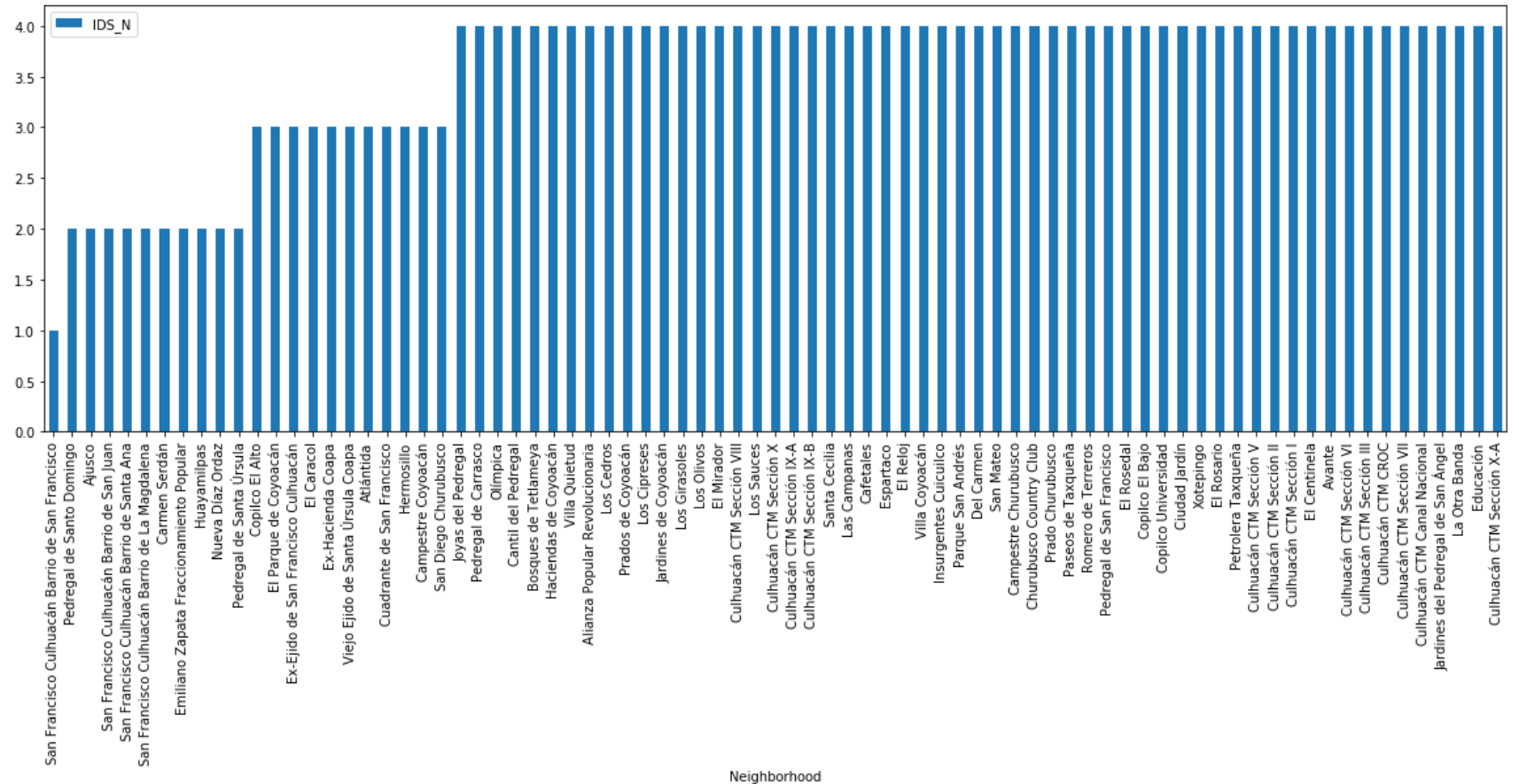
Coyoacan boroughs



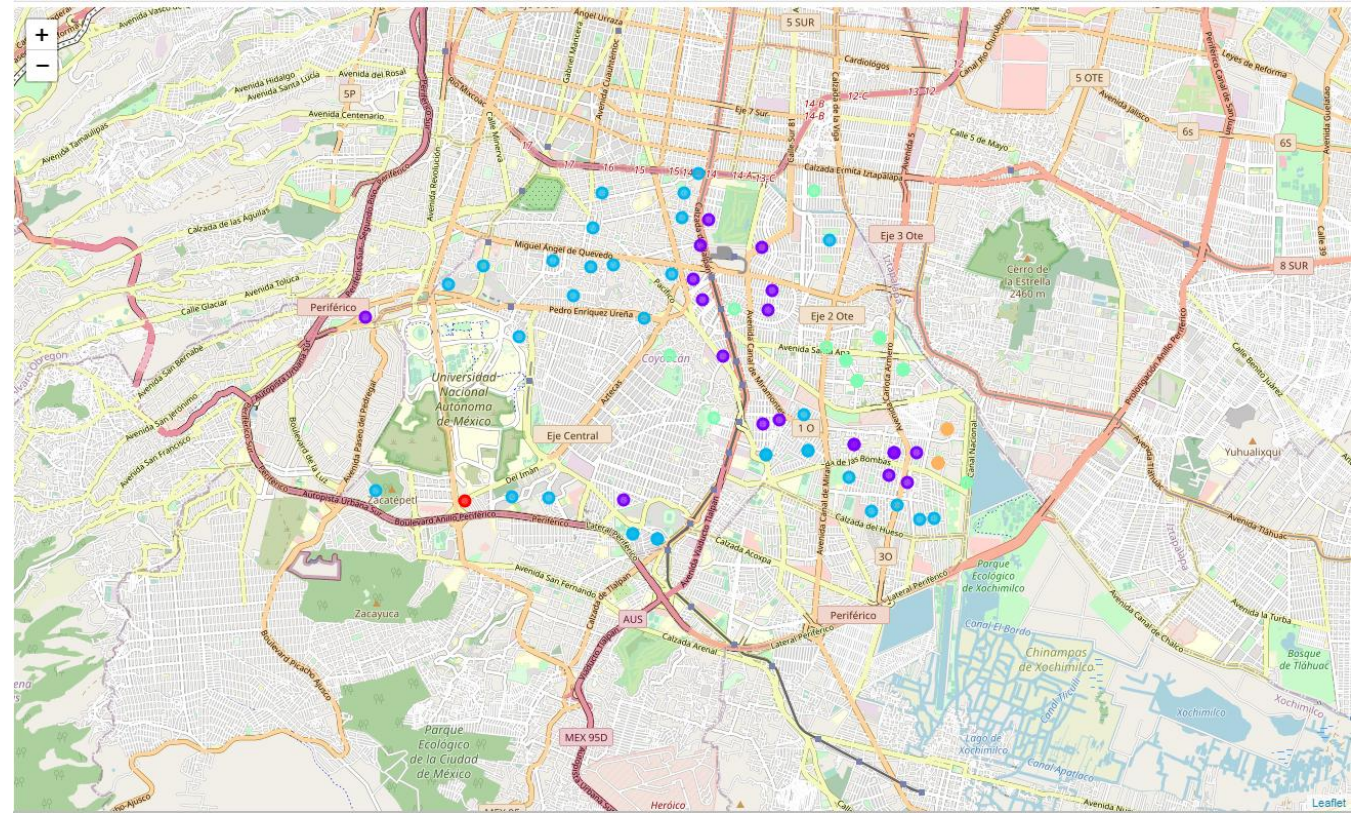
Data cleaning

In the next graph, I plotted the economic development for each neighborhood in Coyoacan, it is represented in a range from 1 to 4 max.

Then I cleaned the data and processed the data filtering the data to only worked with the higher economic development, to train a machine learning algorithm called "**K-means**" which show list of top 10 venue categorized for each neighborhood.



Results



- The cluster number 1 which is at Insurgentes Cuicuilco neighborhood one the most economically developed in Coyoacan is the best place for a Luxury Goods store.

Conclusion

- **The quality of a data** after processing and cleaning, along with the tools that we use, help us to generate value information.
- **The methodology** can be applied in context, toward successfully achieving the goals that were set out in the business requirements stage to achieve better performance
- **Not only in business**, we could apply it to everything, and the reason is because of the greater availability of data and models and analytics to be able to pinpoint where the greatest needs are.