Geographical analysis for restaurant chain introduction

Capstone Project

Coursera, IBM Professional Certification
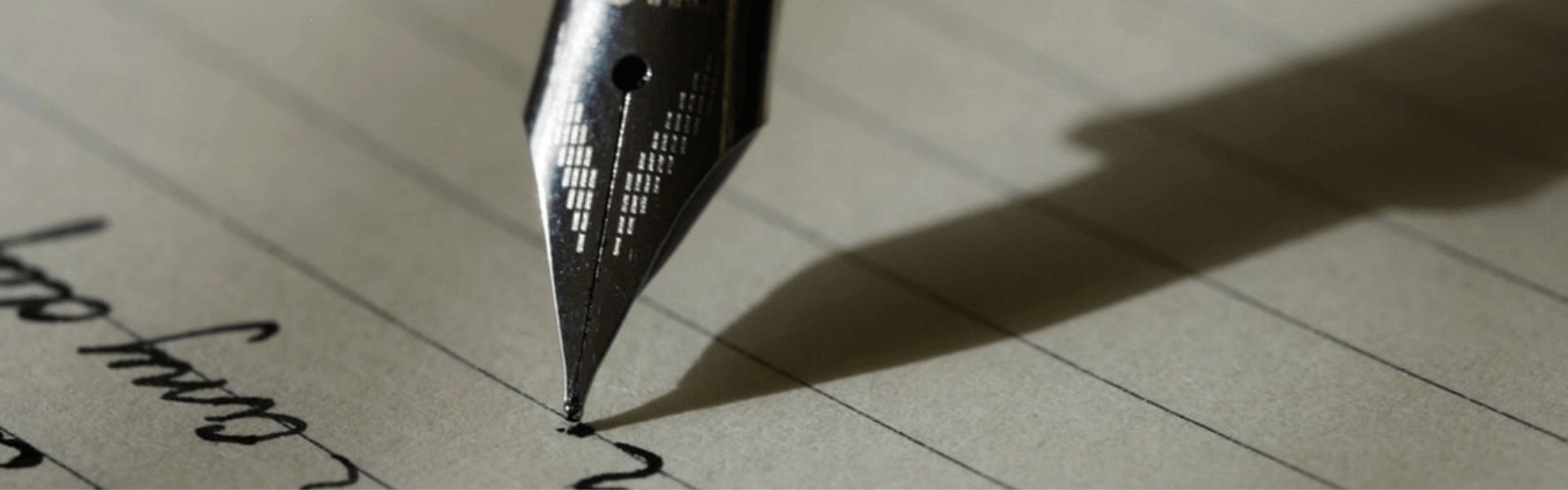May 2020 Felipe Jiménez

Introduction

In this project we will be doing an exploratory analysis to find the best cities in Costa Rica to place locals of a new chain restaurant.

Data

The Data regarding costa Rican territorial division was pulled from the INEC's. wich was use to locate the food related venues in the country.

Problem
Statement

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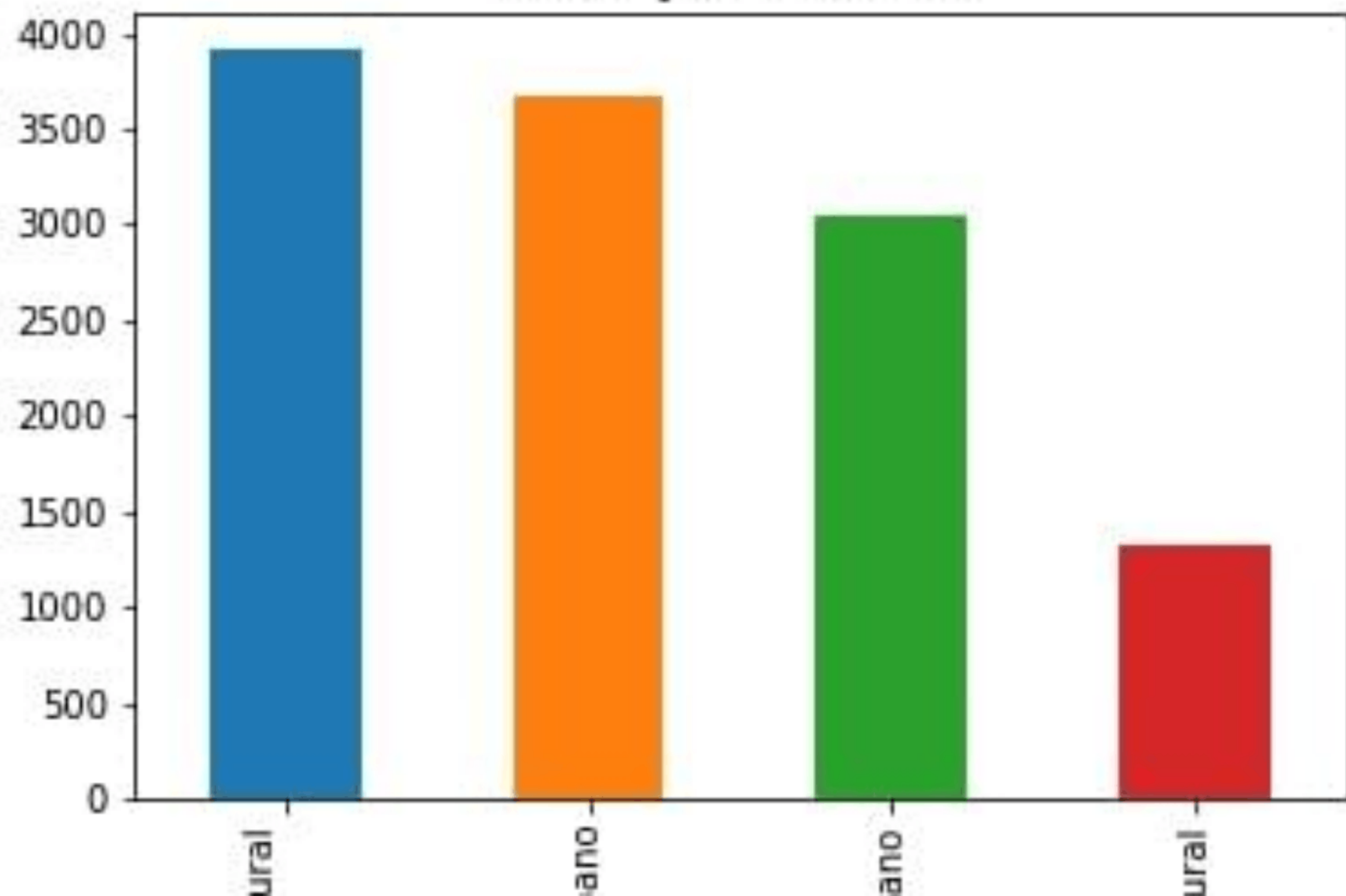
Data Cleaning

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First filter

Urbanity, the urbanization of a city was taken in consideration to create the data frame
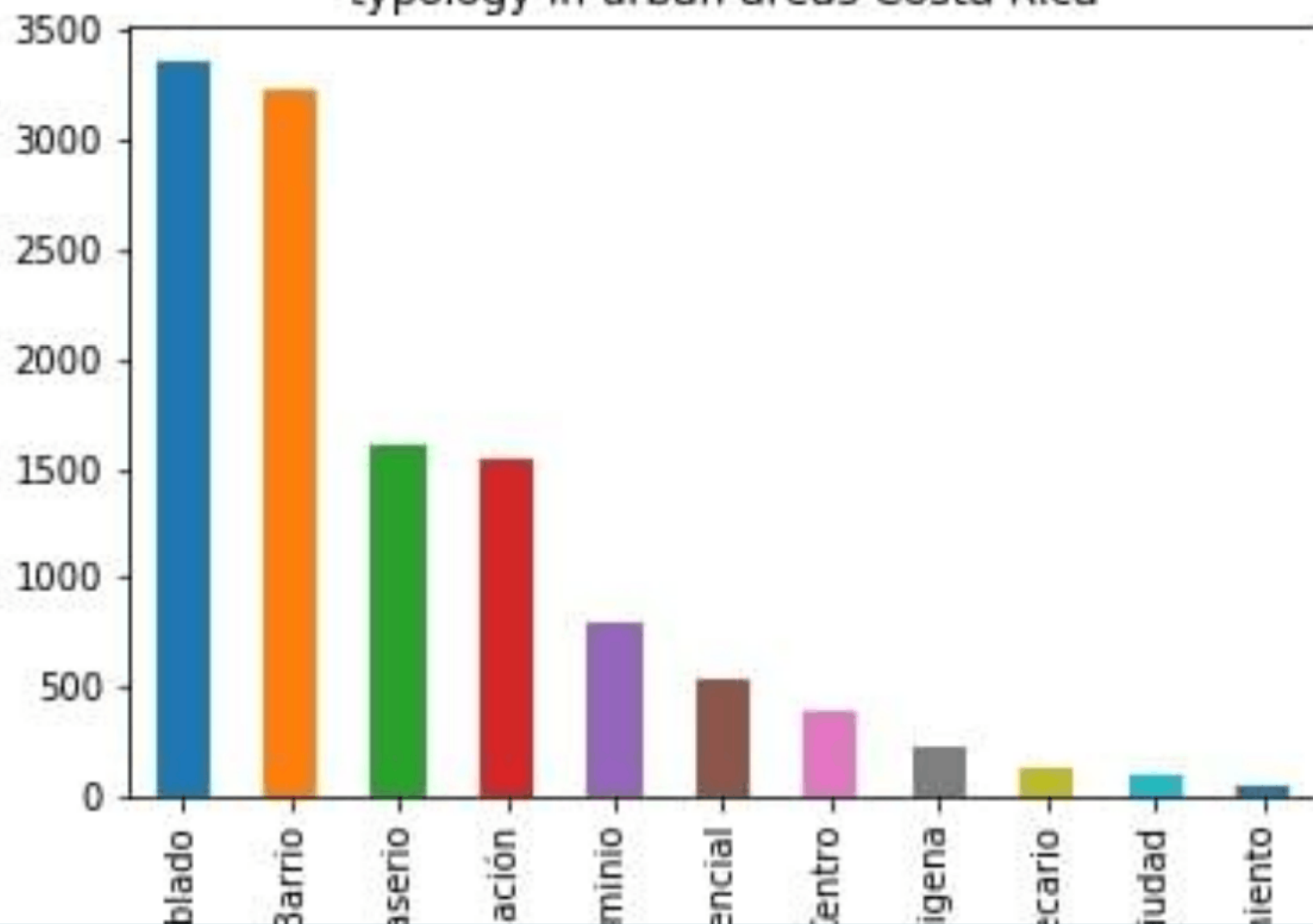
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Second filter

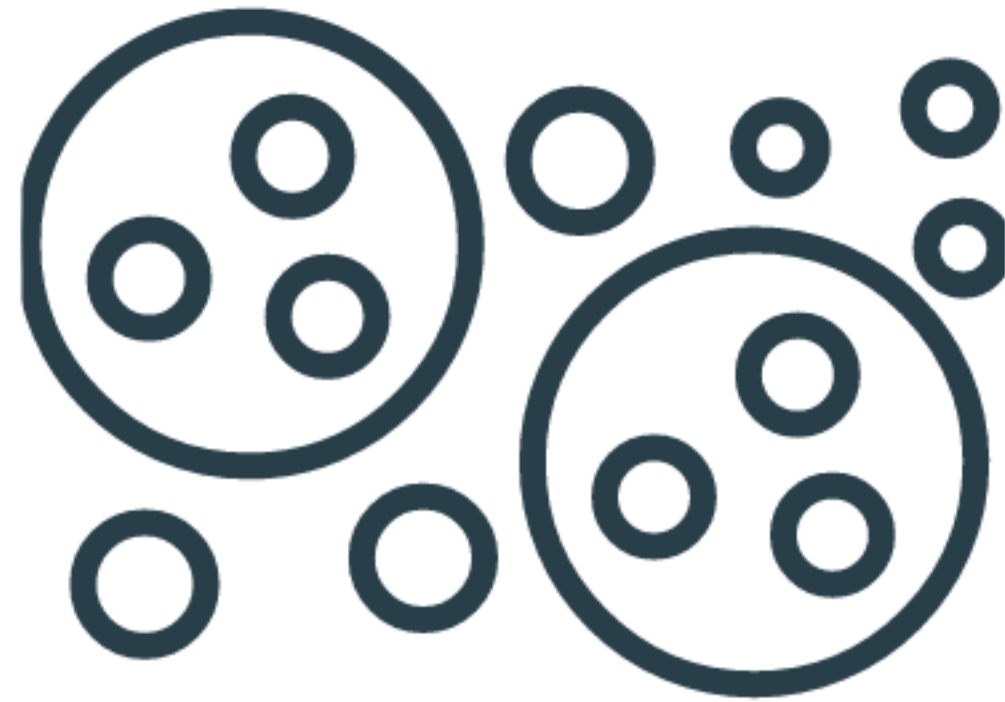Typology, this meas the distribution and size of the city.

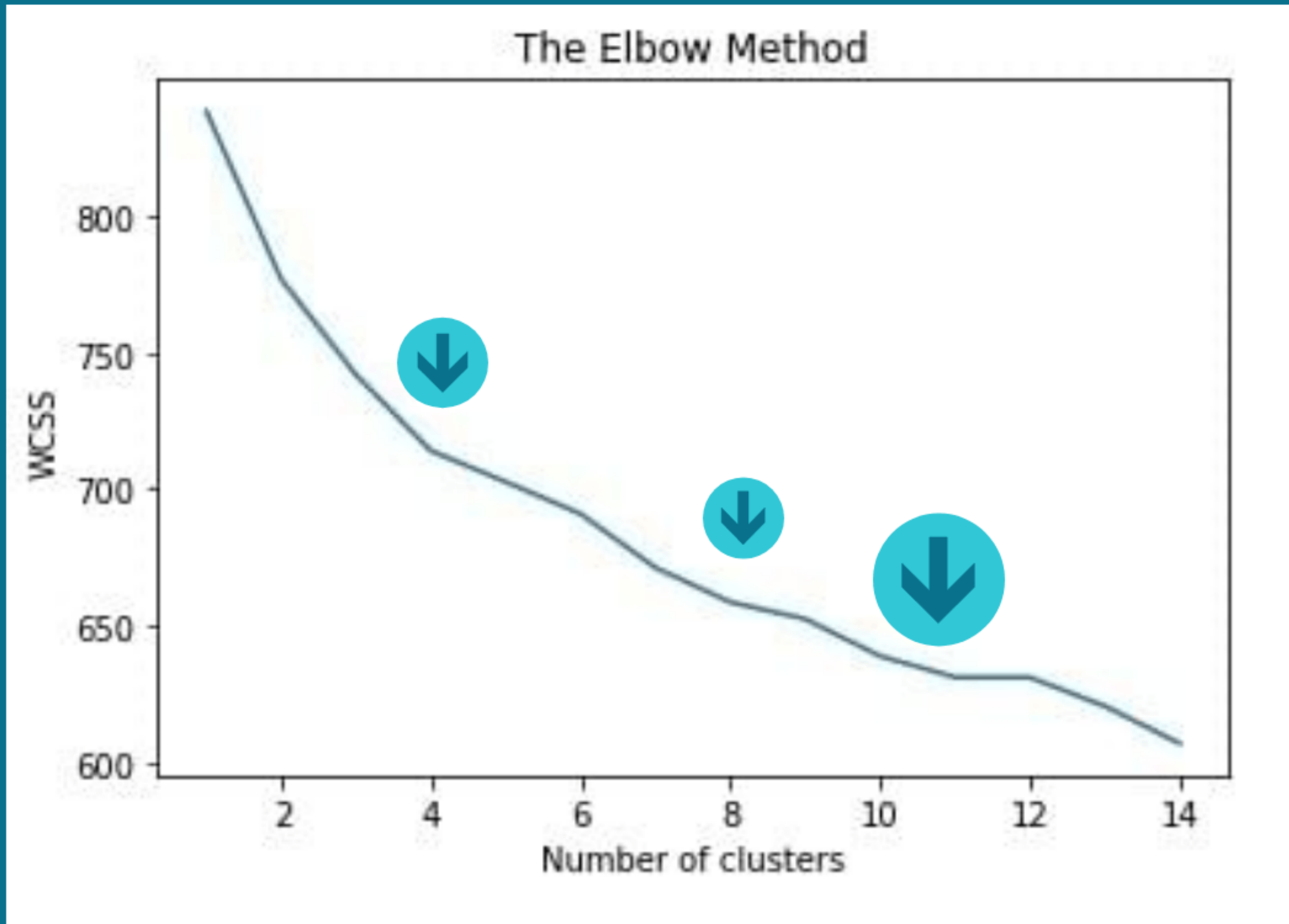urbanity in Costa Rica

typology in urban areas Costa Rica

Methodology

1. **Data Wrangling**
2. **KMEANS**
3. **Explore clusters**
4. **Regroup data based on clusters**
5. **Select cluster based o criteria**
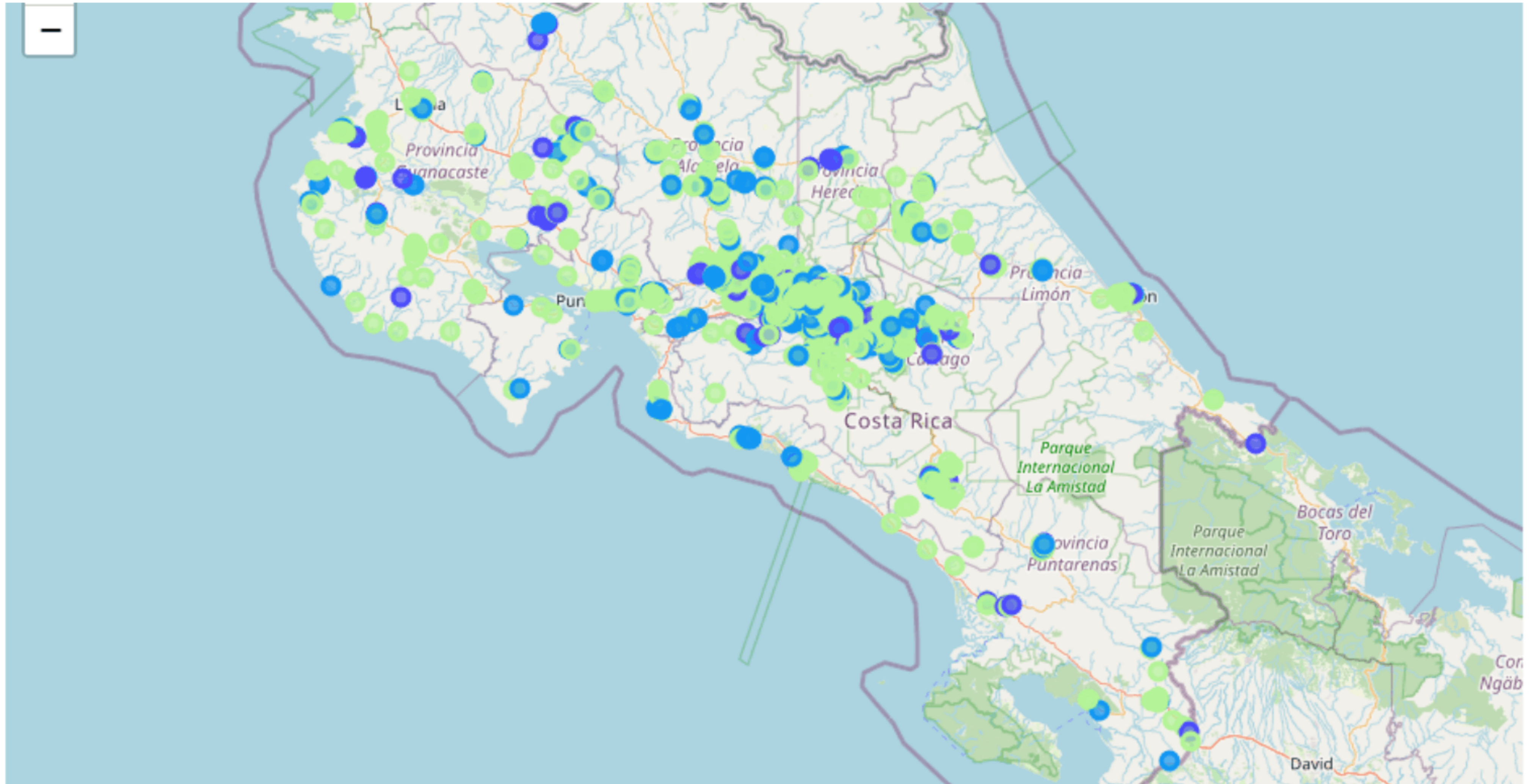6. **Map the cities**

Elbow method

Results

Most common venue grouped by cluster

	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue
0	0	Grocery Store	Bar	Restaurant	Soccer Field
1	1	Bar	Soccer Field	Park	Convenience Store
2	2	Restaurant	Bar	Campground	Brewery
3	3	Restaurant	Bar	Pizza Place	Soccer Field
4	4	Convenience Store	Auto Garage	Burger Joint	Plaza
5	5	Bus Station	Park	Bakery	Pizza Place
6	6	Soccer Field	Grocery Store	Restaurant	Bar
7	7	Pizza Place	Fast Food Restaurant	Bakery	Bar
8	8	Mountain	Burger Joint	Steakhouse	Trail
9	9	Bar	Soccer Field	Steakhouse	Grocery Store
10	10	Campground	River	Supermarket	BBQ Joint

Map with cities of interest

Conclusions

- We can conclude that this study did not gave us the exact location where to place our locals, it narrowed down the options in a good and measurable way.

- With the information requested to Four Square, we can even pinpoint our direct competition. To be closer to it.

- We can take advantage of the technological asses that we have to shorten the time of a project.