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Goiko grill restauran location clustering

Problem introduction

Goiko grill is an Spanish Burger bar chain. They have restaurants throughout Spain. They want to expand into the most profitable locations possible

In order to decide which are the most profitable locations we could cluster the current restaurants and decide which type is the most profitable one and then expand into that type of restaurant

The data

Restaurant list gathered from goiko grill web page

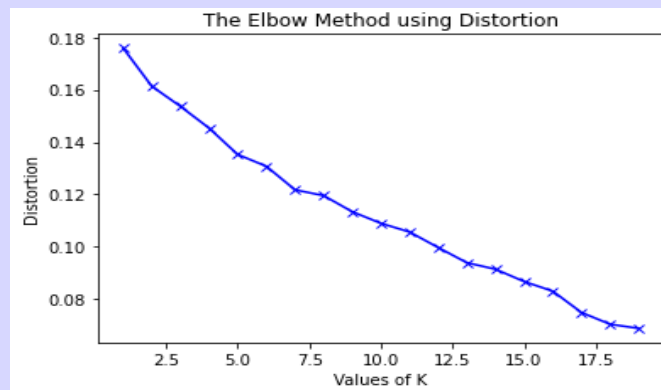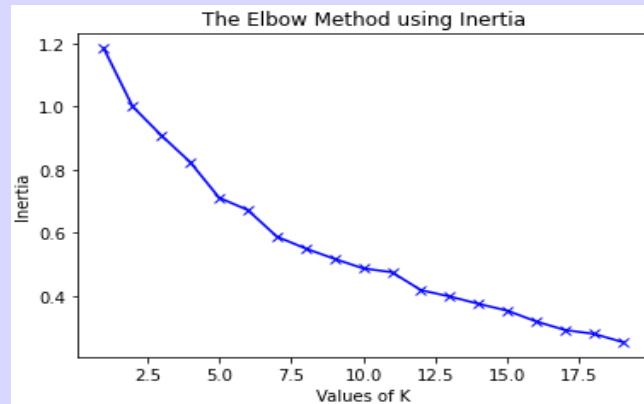Geo location for those restaurants collected manually

Venues data gathered with the foursquare api

Methodology

Elbow method, we used the elbow method to determine the amount of clusters.

Algorithim, we used k means clustering to conduct our analysis

The Elbow Method using Inertia

The Elbow Method using Distortion

	City	Location	Latitude	Longitude	Cluster Labels
0	Madrid	María de Molina 20, Madrid	40.437680	-3.686744	1
1	Valencia	Martínez Cubells 4, Valencia	39.468176	-0.374816	1
2	Zaragoza	San Miguel 7, Zaragoza	41.651058	-0.880645	0
3	Alicante	Pablo Iglesias 5, Alicante	38.347451	-0.488203	2
4	Barcelona	Sant Joan 58, Barcelona	41.396366	2.174007	1

Results

- Label 0: Leisure areas
- Label 1: Cosmopolitan cities and áreas
- Label 2: City based shopping areas
- Label 3: Out of city shopping malls

Histogram of restaurants per cluster
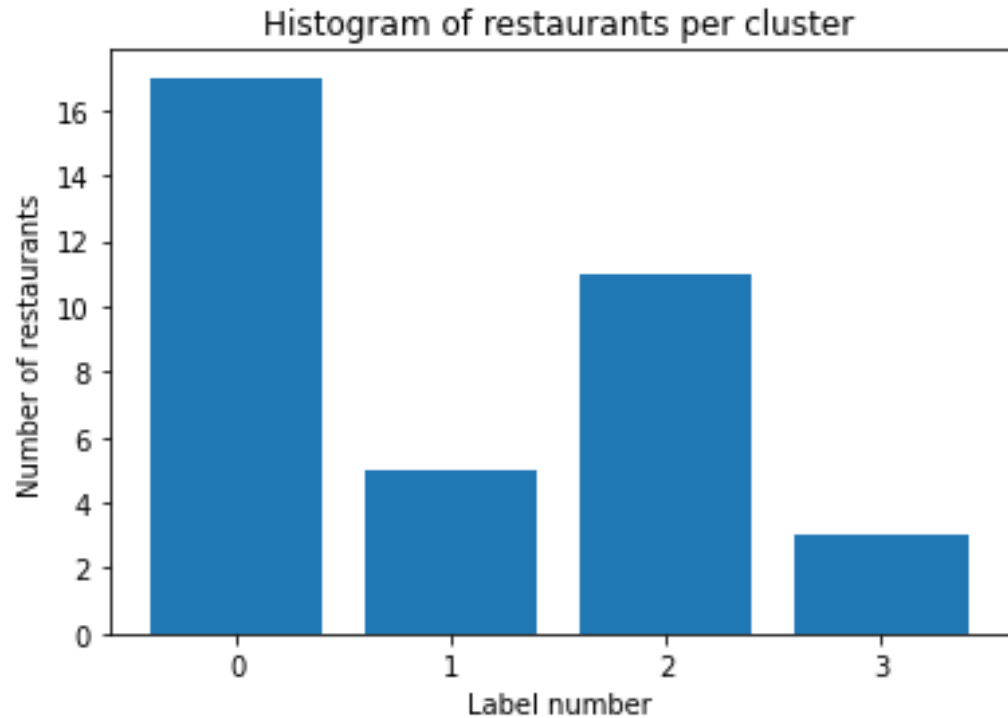
Discusión and conslusion

We have been able to cluster the data into 4 different cateogires

We have been able to determine which type of restaurant is abailable in each city

Further data (profitability) is needed to determine which are the most succesful types of restaurant and therefore help on the expansion