

Clustering sea cities of Spain

Alla Sidko



Business Problem

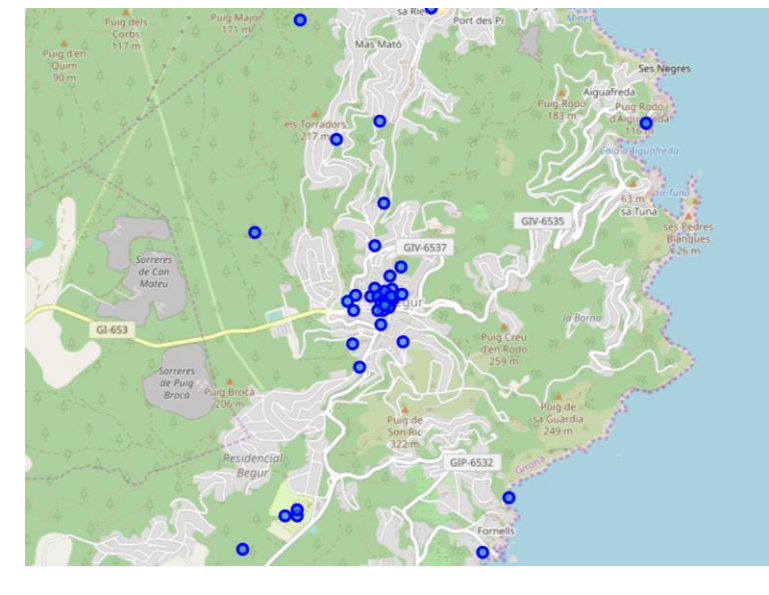
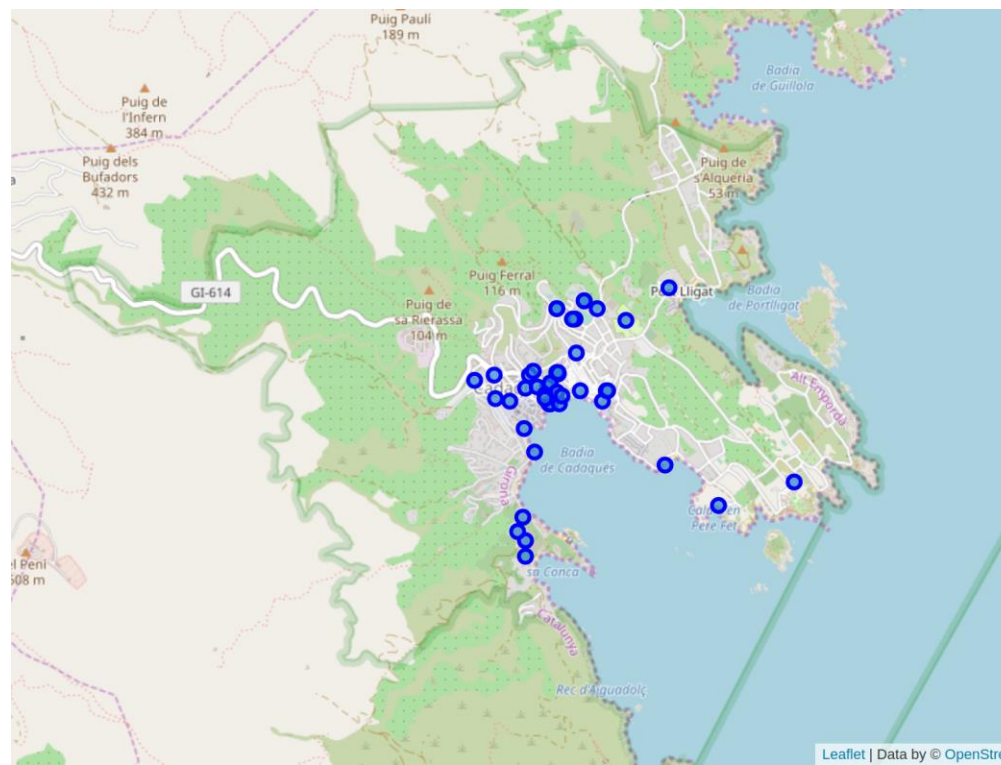
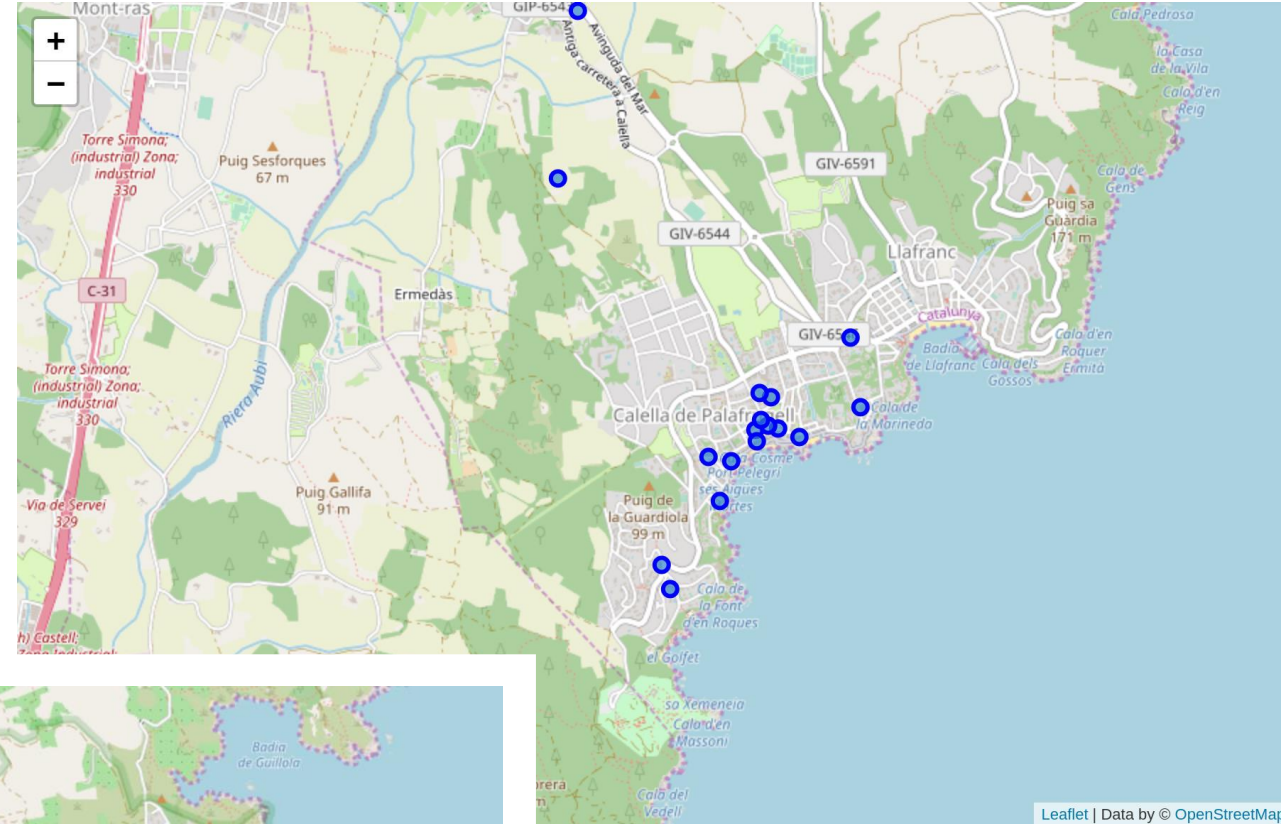
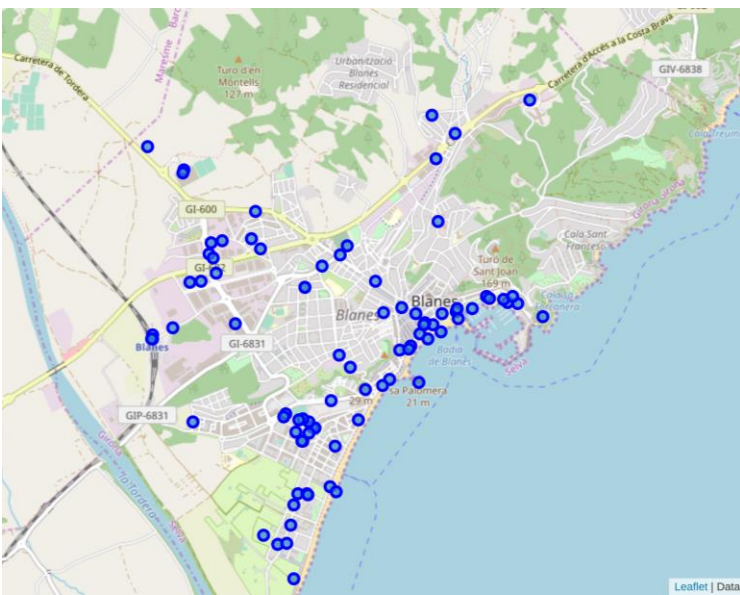
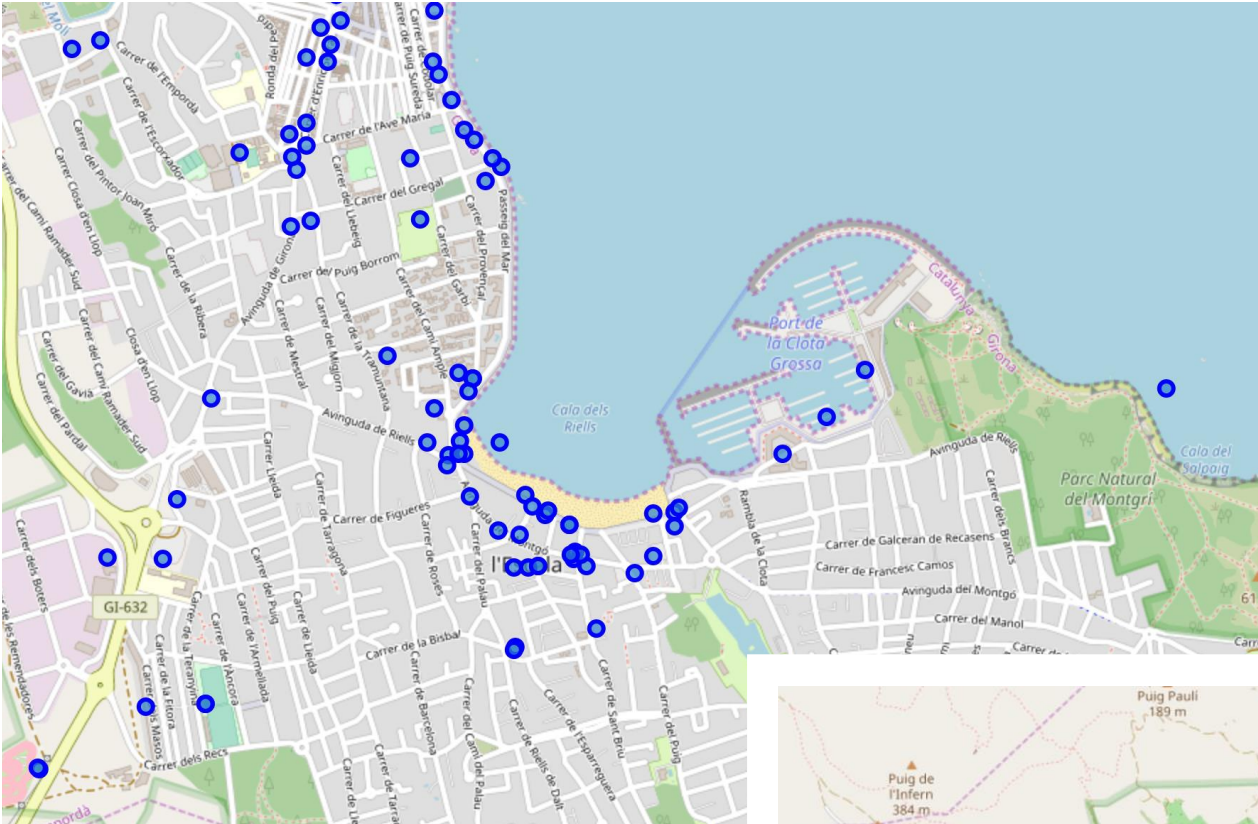
- If you decide to travel to the Europe, one of the most popular sea country is Spain
- The most popular Spanish mainland coasts are on its Mediterranean side.
- Explore **Costa Brava**
- Problem to choose the most appropriate town, that can satisfy your needs and possibilities
- Project aims to describe 11 similar sea towns in Spain and which town would be suitable for different needs

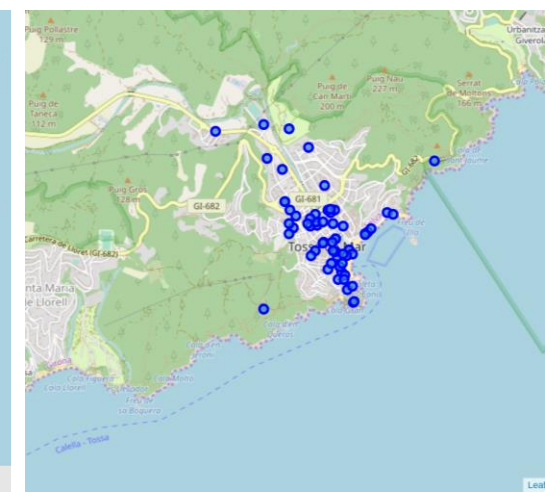
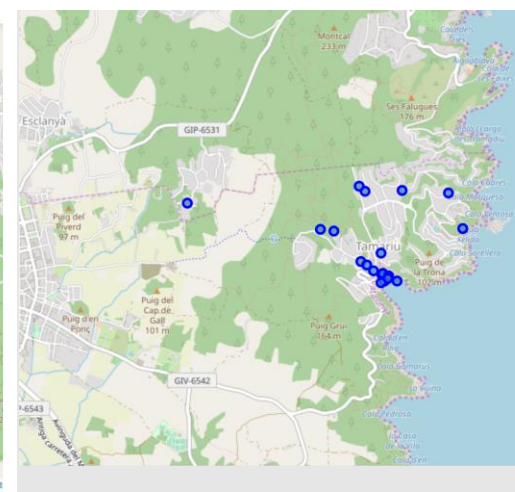
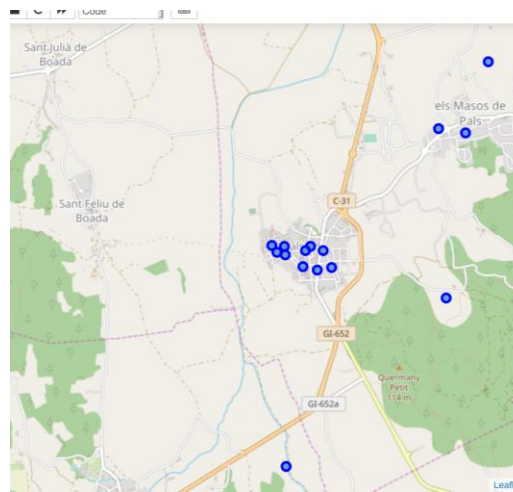
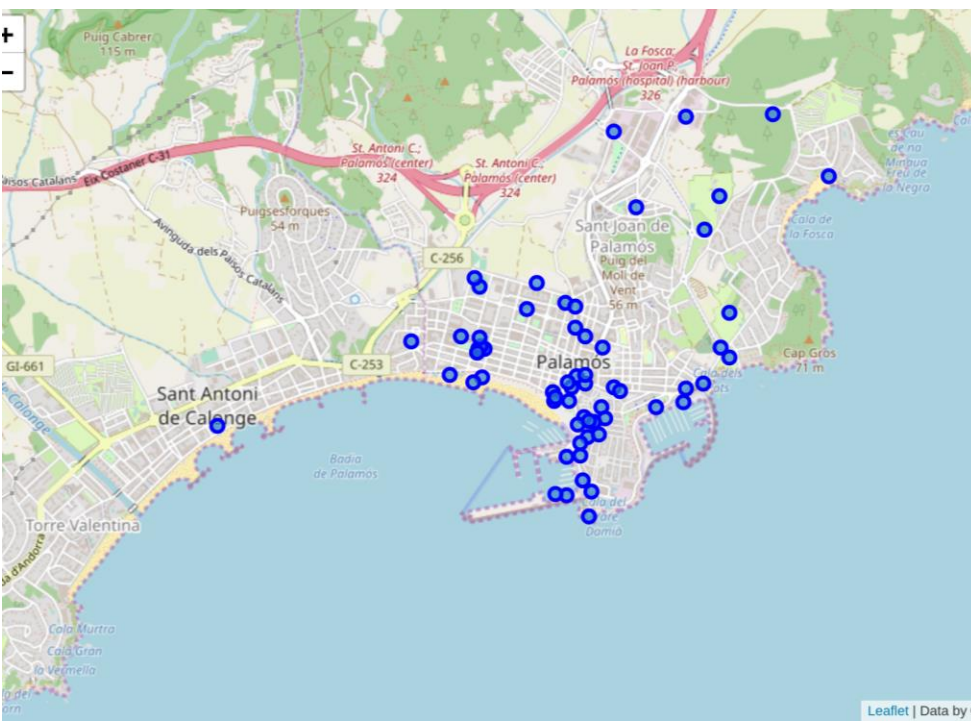
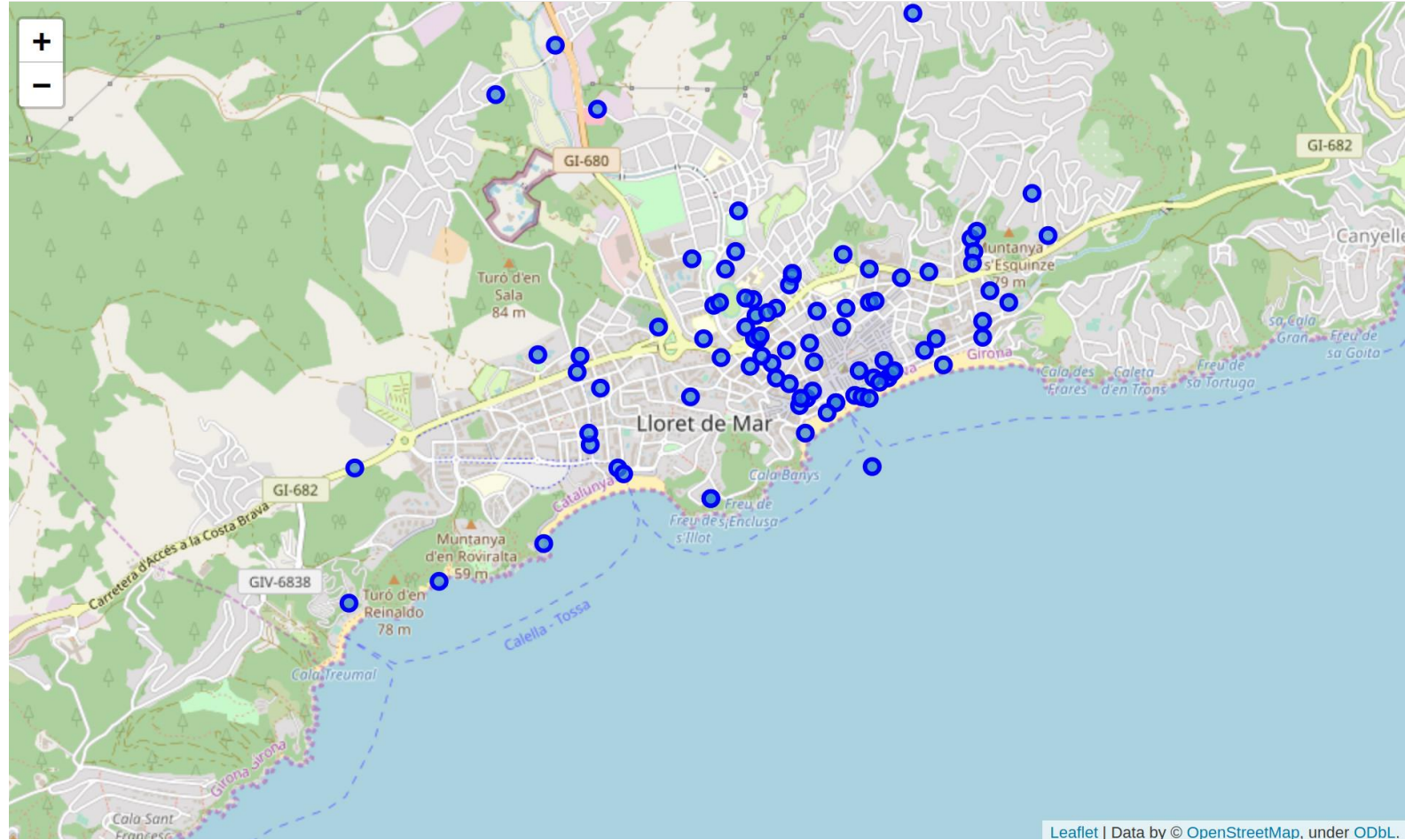
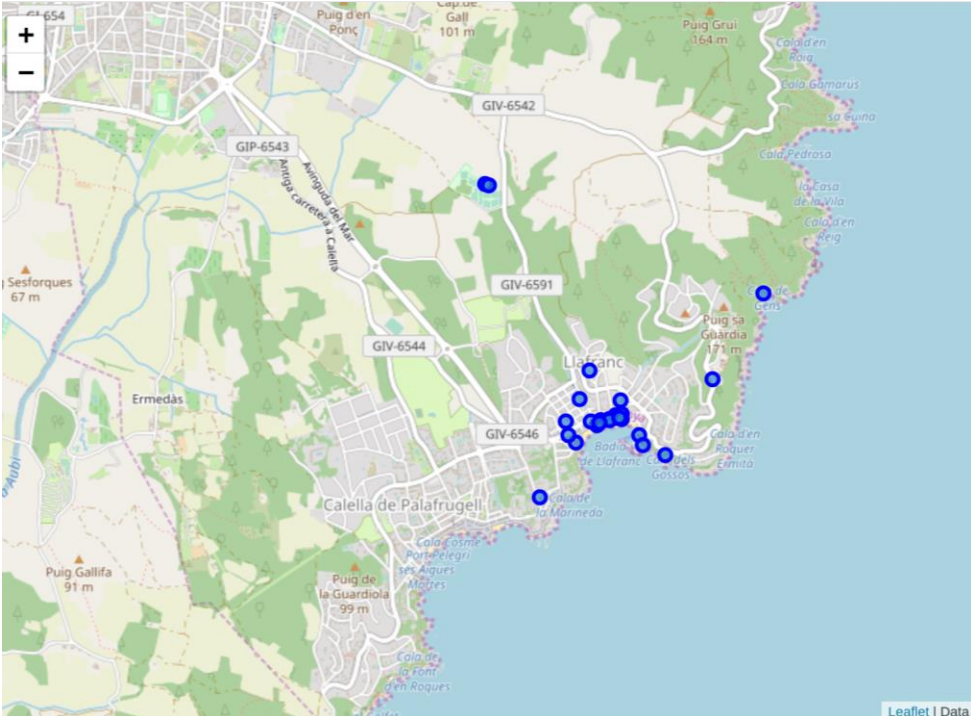


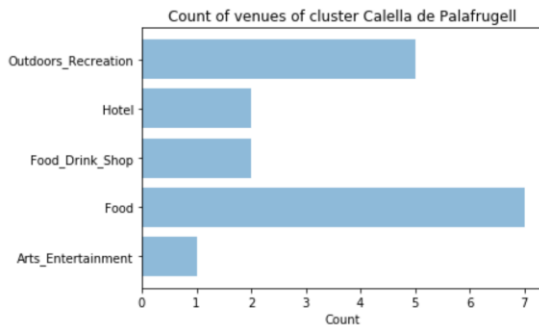
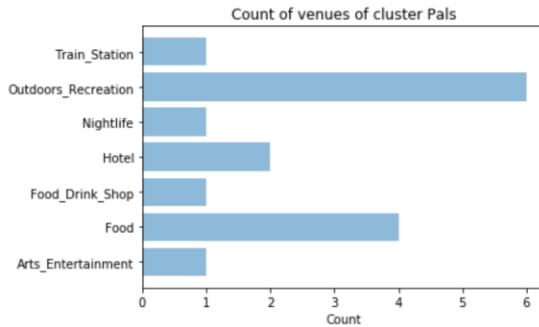
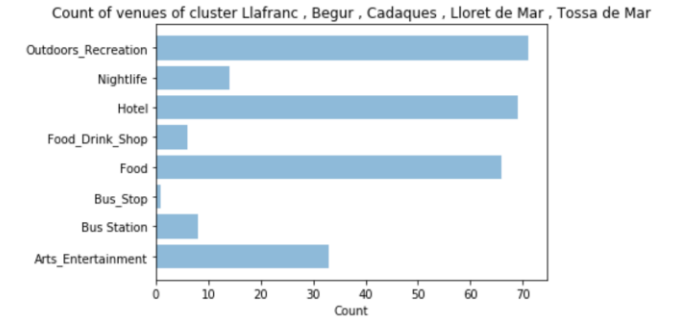
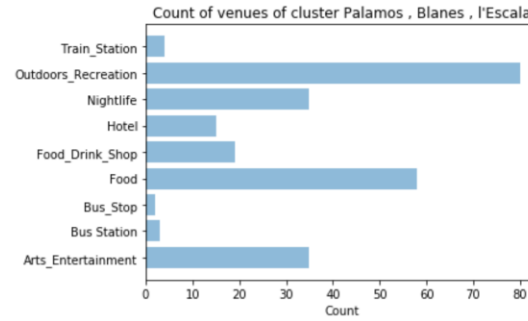
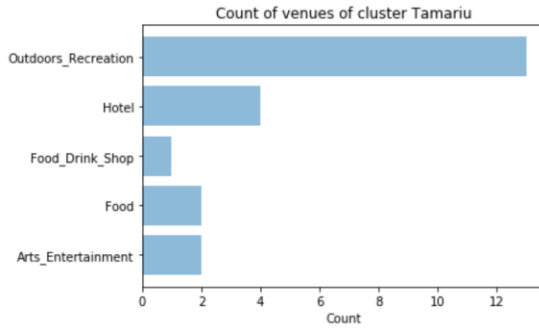
Data

- **Foursquare** location data
- Data for "Palamos", "Calella de Palafrugell", "Llafranc", "Tamariu", "Pals", "Begur", "Cadaques", "Lloret de Mar", "Tossa de Mar", "Blanes", "l'Escala"
- Categories: Hotel, Food, Food&Drink Shop, Bus Stop, Bus Station, Train Station, Nightlife, Outdoors&Recreation, Arts&Entertainment
- 11 tables with venues of selected categories for each of towns
- In all 574 rows and 8 columns.
- Columns: categories, lat, lng, city, formatted Address, main_categories, id.



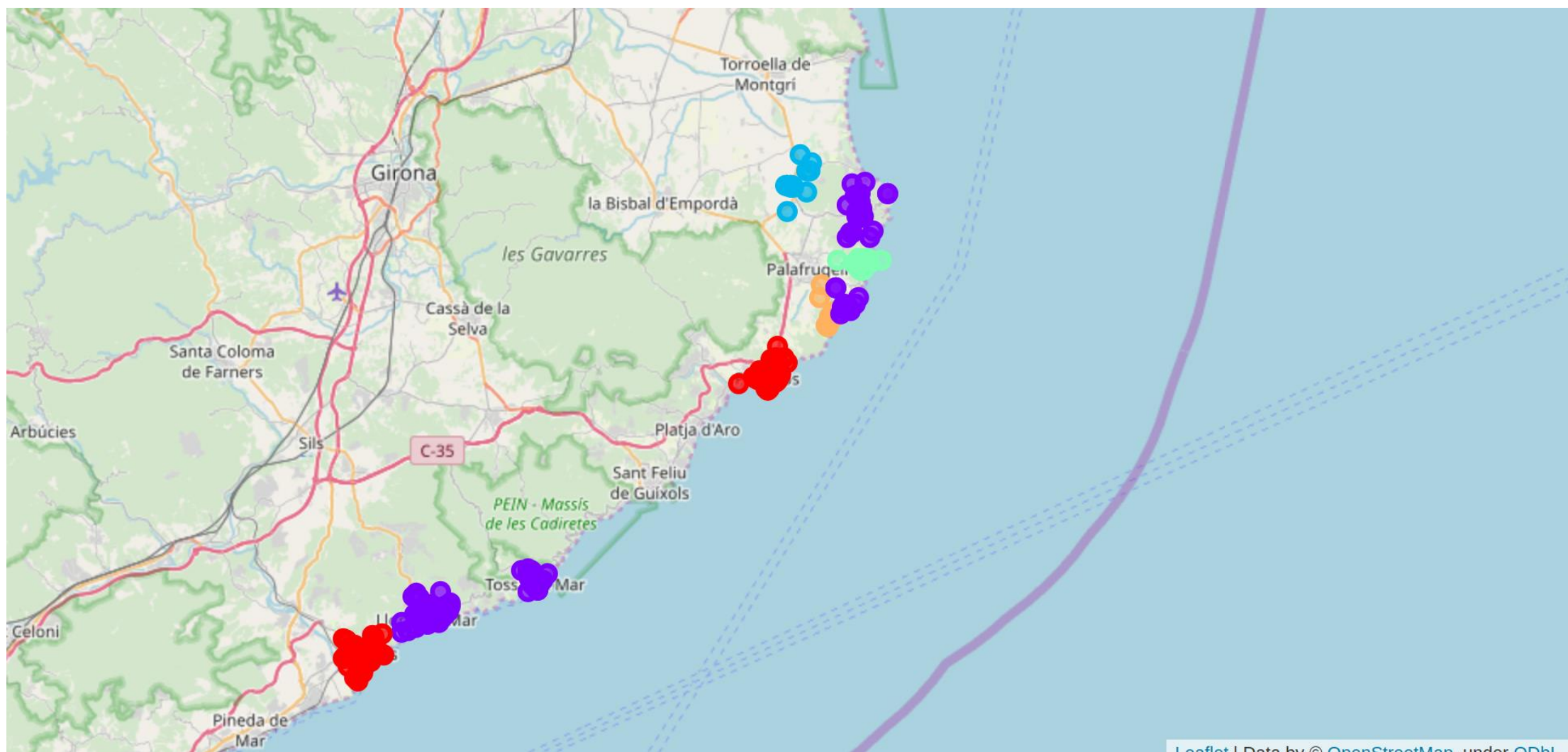


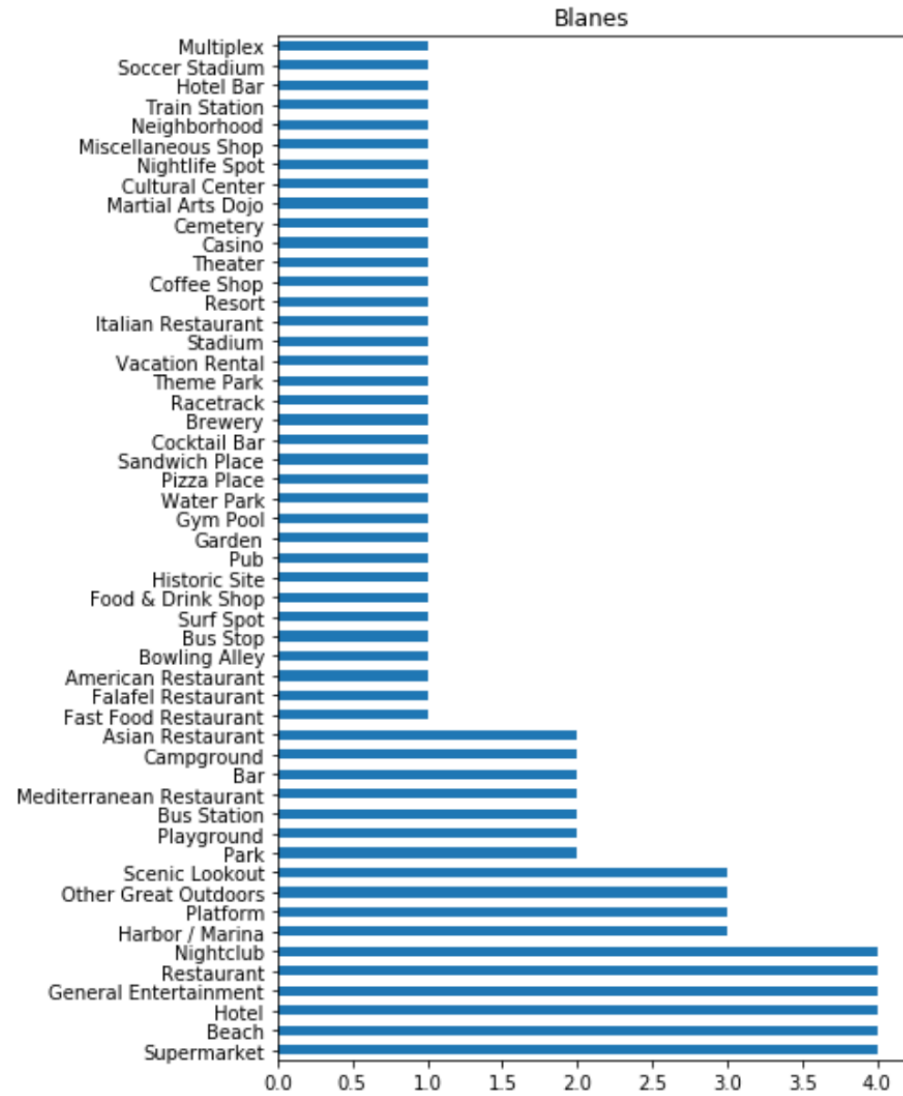




K-means Clustering

- 5 clusters
- Pals, Tamariu, and Calella de Palafrugell are clusters, that have very little amount of venues comparing with other two clusters.
- Begur and Pals are not located near the sea

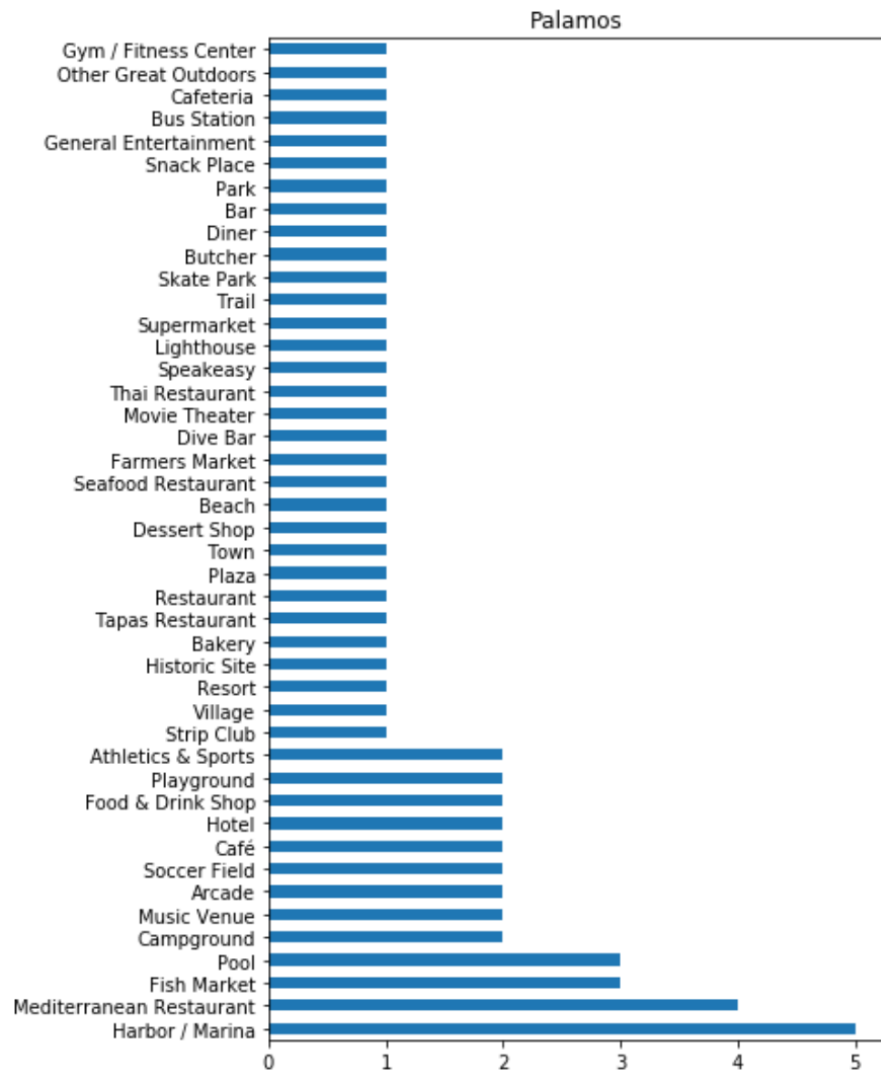




Blanes

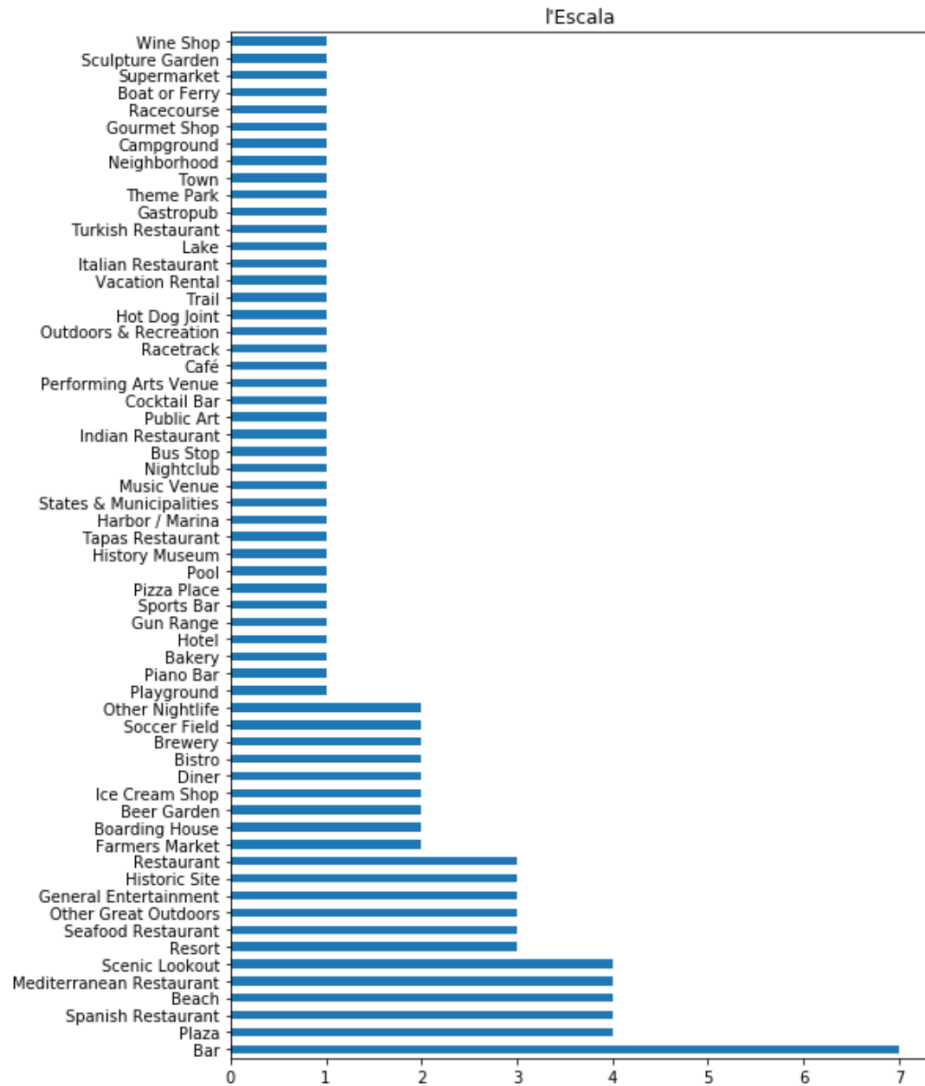
Outdoors_Recreation	25
Arts_Entertainment	14
Food	14
Nightlife	13
Hotel	6
Food_Drink_Shop	6
Train_Station	4
Bus Station	2
Bus_Stop	1

Blanes



Palamos	
Outdoors_Recreation	26
Food	14
Food_Drink_Shop	8
Arts_Entertainment	6
Nightlife	6
Hotel	3
Bus Station	1

Palamos

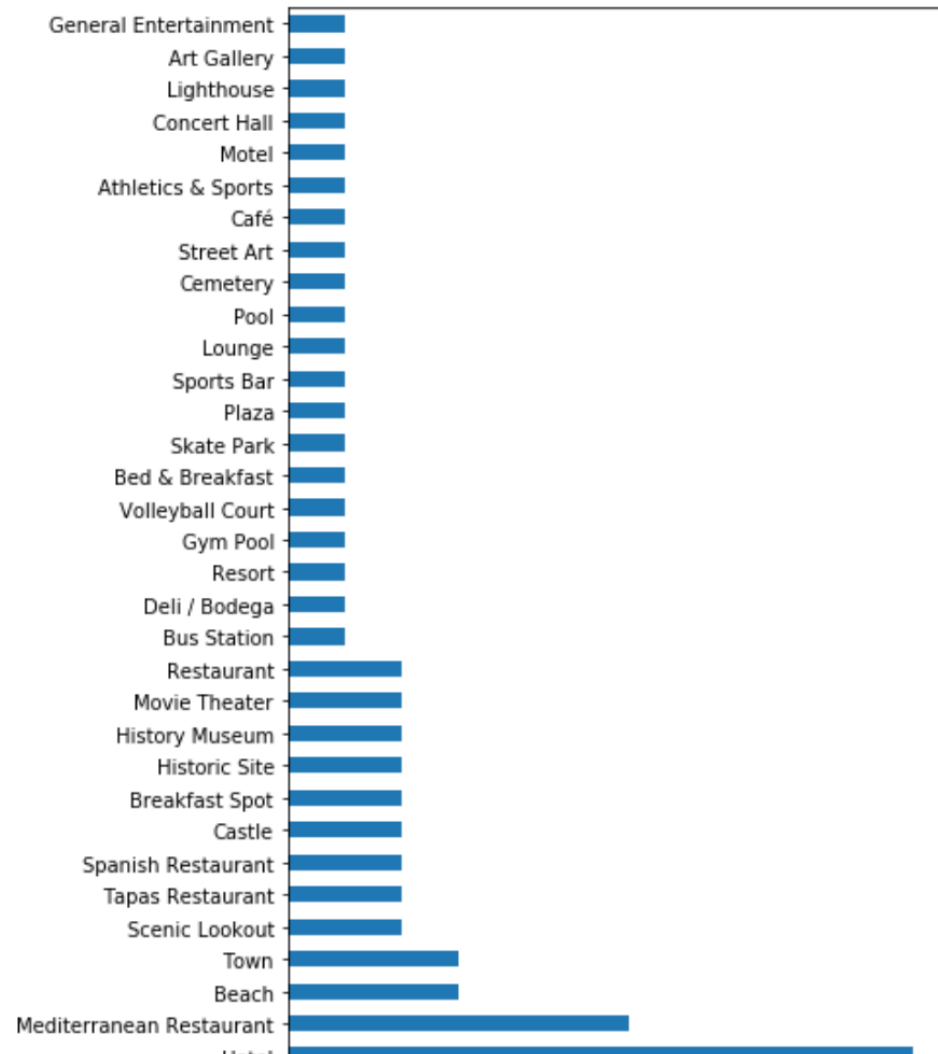


l'Escala

Food	30
Outdoors_Recreation	29
Nightlife	16
Arts_Entertainment	15
Hotel	6
Food_Drink_Shop	5
Bus_Stop	1

L' Escala

Tossa de Mar

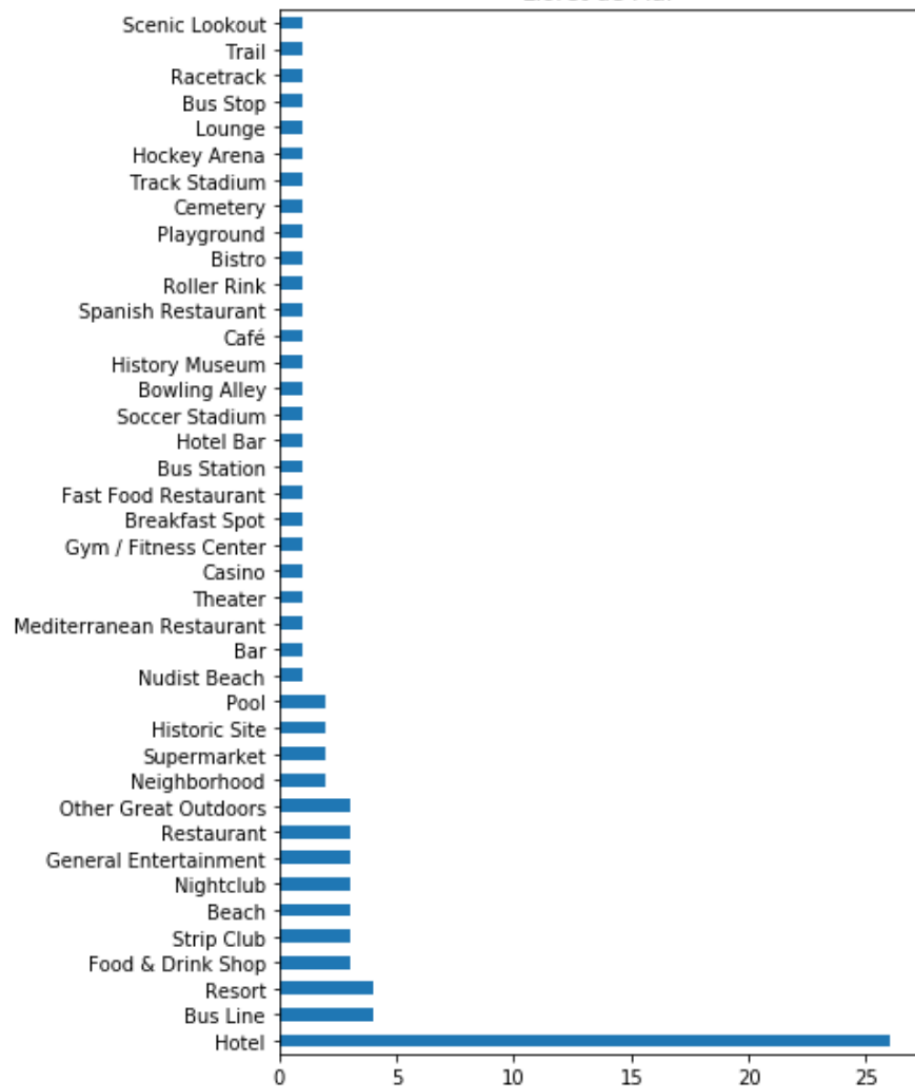


Tossa de Mar

Outdoors_Recreation	18
Food	17
Hotel	13
Arts_Entertainment	10
Nightlife	2
Bus Station	1

Tossa de
Mar

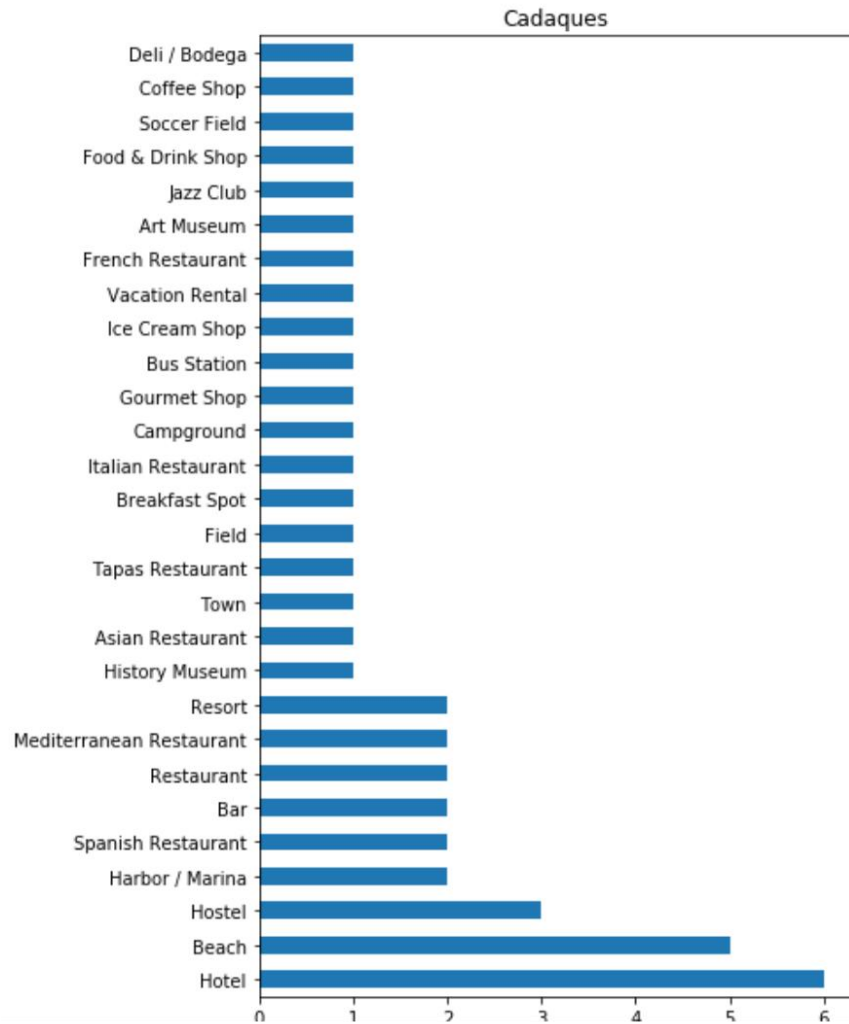
Lloret de Mar



Lloret de Mar

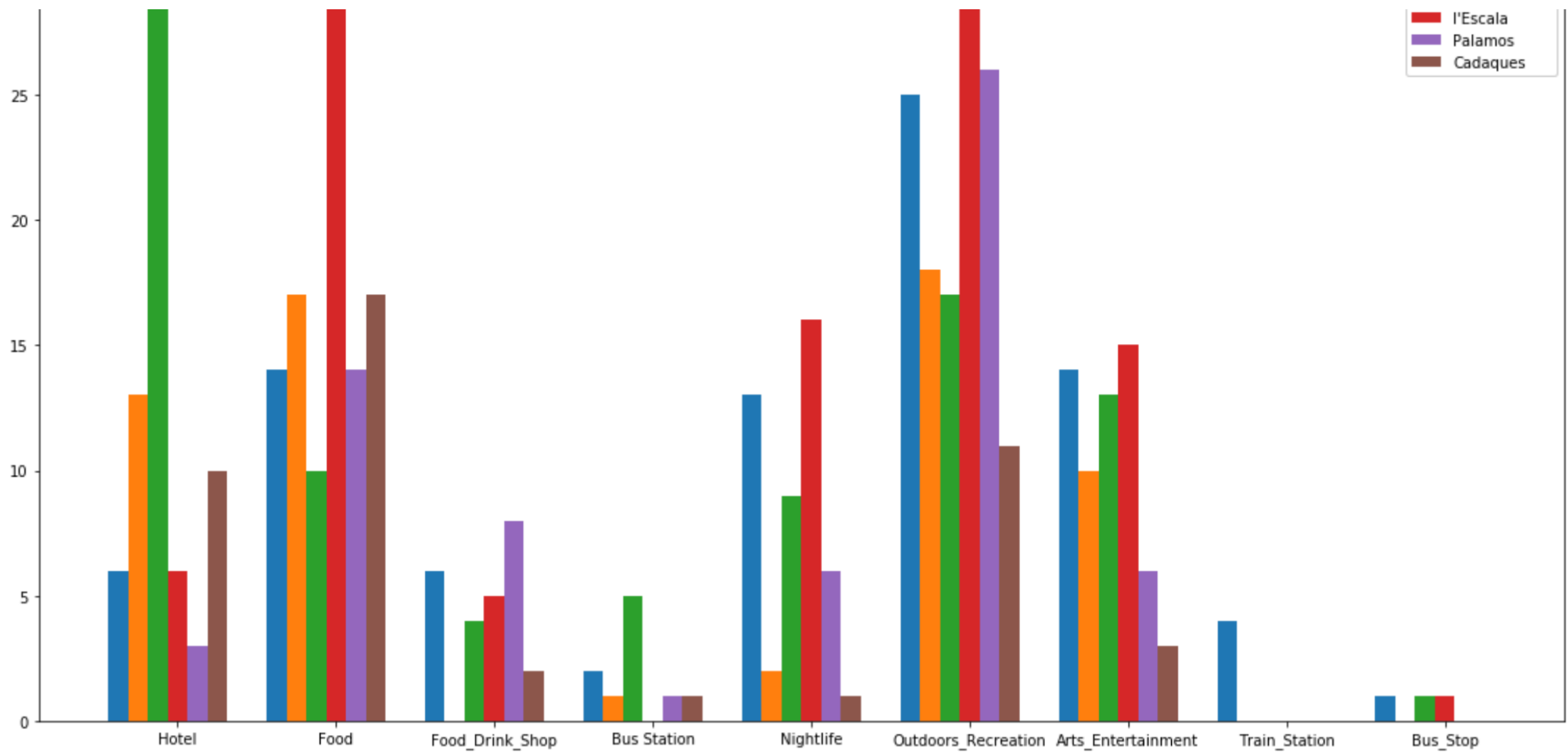
Hotel	30
Outdoors_Recreation	17
Arts_Entertainment	13
Food	10
Nightlife	9
Bus Station	5
Food_Drink_Shop	4
Bus_Stop	1

Lloret de
Mar



Cadaques	
Food	17
Outdoors_Recreation	11
Hotel	10
Arts_Entertainment	3
Food_Drink_Shop	2
Bus Station	1
Nightlife	1

Cadaques





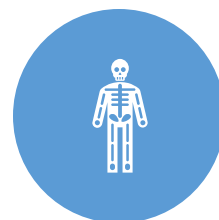
THE BIGGEST NUMBER OF
HOTELS IS IN **LLORET DE
MAR.**



THE BIGGEST NUMBER OF
FOOD PLACES IS IN **L'ESALA.**



THE BIGGEST NUMBER OF
FOOD AND DRINK SHOPS IS
BLANES AND PALAMOS.



THE BIGGEST NUMBER OF
NIGHT LIFE IS IN **BLANES
AND L'ESALA.**



THE BIGGEST NUMBER OF
OUTDOORS AND
RECREATION IS IN **BLANES,
L'ESALA, AND PALAMOS.**



THE BIGGEST NUMBER OF
ART ENTERTAINMENT IS IN
**BLANES, LLORET, AND
L'ESALA.**



Results

- Family with children - **Blanes, Palamos, Lloret de Mar**
- Couples - **Tossa de Mar, Blanes**
- Aged people - **Palamos, Tossa de Mar**
- Friends - **l'Escala, Blanes, Lloret de Mar**
- People, who want calm vacation - **Cadaques, Tossa de Mar**
- People, who love active rest - **Blanes, Lloret de Mar**



Conclusion

My top towns, that are leaders in most categories and could be suitable for a lot of groups of people:

- Blanes
- Lloret de Mar
- Tossa de Mar.

