

1.- Introduction and Business Problem

Barcelona is one of the most important nodes of tourism in the Mediterranean Sea, therefore the offer of accommodation facilities is incredibly competitive, and business related to it rise and fall very quickly.

My client is planning to open a Bed & Breakfast with a tiny bar to attract young tourists into a nicer and closer ambient than the normal hotels can offer. The location of both hospitality and restaurant facilities near the potential ubication are key factors for success. This work will determine the idoneal position of this establishment.

2.- Data

The data required to this project is essentially:

- 1.- Names and Coordinates of Hotels and Hostals
- 2.- Names and Coordinates of Neighbourhoods
- 3.- Cultural venues and traffic in some tourist areas

The Names and Coordinates of Neighbourhoods can easily be scraped from Wikipedia or the Townhall page. They will be obtained by *selenium* and *selenium.webdriver*.

The information of both the hotels and the traffic will be obtained by the Foursquare API and both datasets will me merged in one.

A K-means clustering will be performed to classify the characteristics and get the similarities of the different districts and zones. Once that is done, we will see wich one is better suited to have this kind of establishment, essentially because of the absence of other like it.