## Perfect Beer Bar Location in Paris

## Data description

In order to provide the best location for opening a bar the number of key features should be accounted. First of all, we limit the search inside the city of Paris and do not consider the suburbs. Paris consists of 20 arrondissements (districts)<sup>1</sup>. The problem of finding the location will be split into two parts:

- 1. Find an appropriate district
- 2. Find the neighbourhood inside the selected district

These two problems will use different parameters but the final results will provide several options, e.g. top 3 districts and top 3 neighbourhoods inside each to set up a bar. Below, I describe the possible way to solve address subproblems.

## Finding the best district

The choice of a district depends mainly on data accessibility. In this case the following features are chosen for starting the analysis.

Feature name	Description	Source (hyperlink)
Number	District number	link
Population	District population	link
Cultural sites	Different cultural sites and their locations	link
Employees	Number of employees registered in the district	link
Cost	Average property cost for m <sup>2</sup>	link

Table 1

These features are chosen for the following reasons. The number of inhabitants (Population) and employed people (Employees) in a district correlate with the possibility of going out in the neighbourhood. In other words, the more people in the district the more potential clients there are, which nonetheless depends on the playability of these people, i.e. those who have jobs and can spend money in bars. The number of cultural sites correlates with the amount of tourists who visit the district which will also increase chances to get customers. The average property cost is a quantity which also plays role in starting this business. Therefore, it is desirable to find an optimum between these features to select the right district or at lease several of them.

## Finding the best Neighbourhood

After completing the step one of the research, we proceed in finding the actual geographical location for a bar. For this reason it is necessary to study the picked districts in more details. Particularly, features of Table 2 will be considered with the help of the Foursquare database.

<sup>&</sup>lt;sup>1</sup>https://en.wikipedia.org/wiki/Arrondissements\_of\_Paris

Feature name	Description	
Bars	Locations of other bars in a district	
Rate	Ratings of these bars	

Table 2

Ideally the perfect location should not be very close to high density of other bars. Moreover, it is better to choose a position farther from the places with high ratings. Therefore, the clustering should be performed which will help to solve the problem.