

# British Pub in Madrid?

Final Project for Data Science Professional Certificate on Coursera

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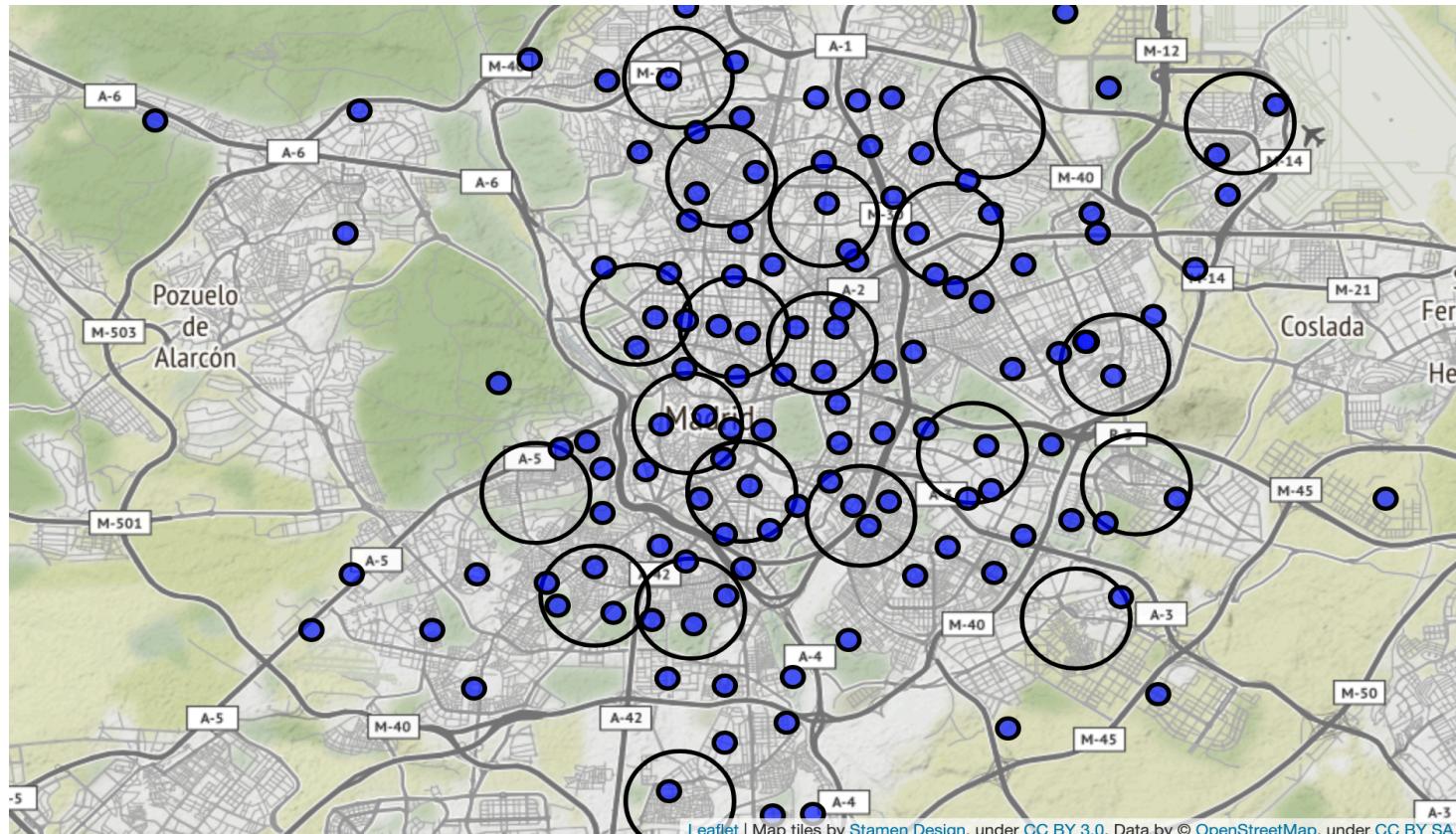
# The Business Problem

- In the project, I will try and locate the best place for a company to set up a British/Irish-style pub in Madrid, Spain. There are already several of such pubs in Madrid, but I want to identify which district would be the optimal.
- Since there are lot of these pubs in Madrid and since they are little bit of a novelty, it is prudent to work out their competition and in which areas they tend to be more popular or other types of bars or Tapas bars. It is also important to find a location as close to the central districts as possible.

# Information Required

- Number of pubs already in Madrid
- What their main competition is
- Where they are located as opposed to the competition
- Location compared to the city-centre
- Location coordinates of Madrid districts/barrios (neighbourhoods)
- Number of British/Irish-style pubs already in Madrid
- Location of the competition
- Where such pubs are more popular than the competition

# *Districtos y Barrios*



# Venues Selected

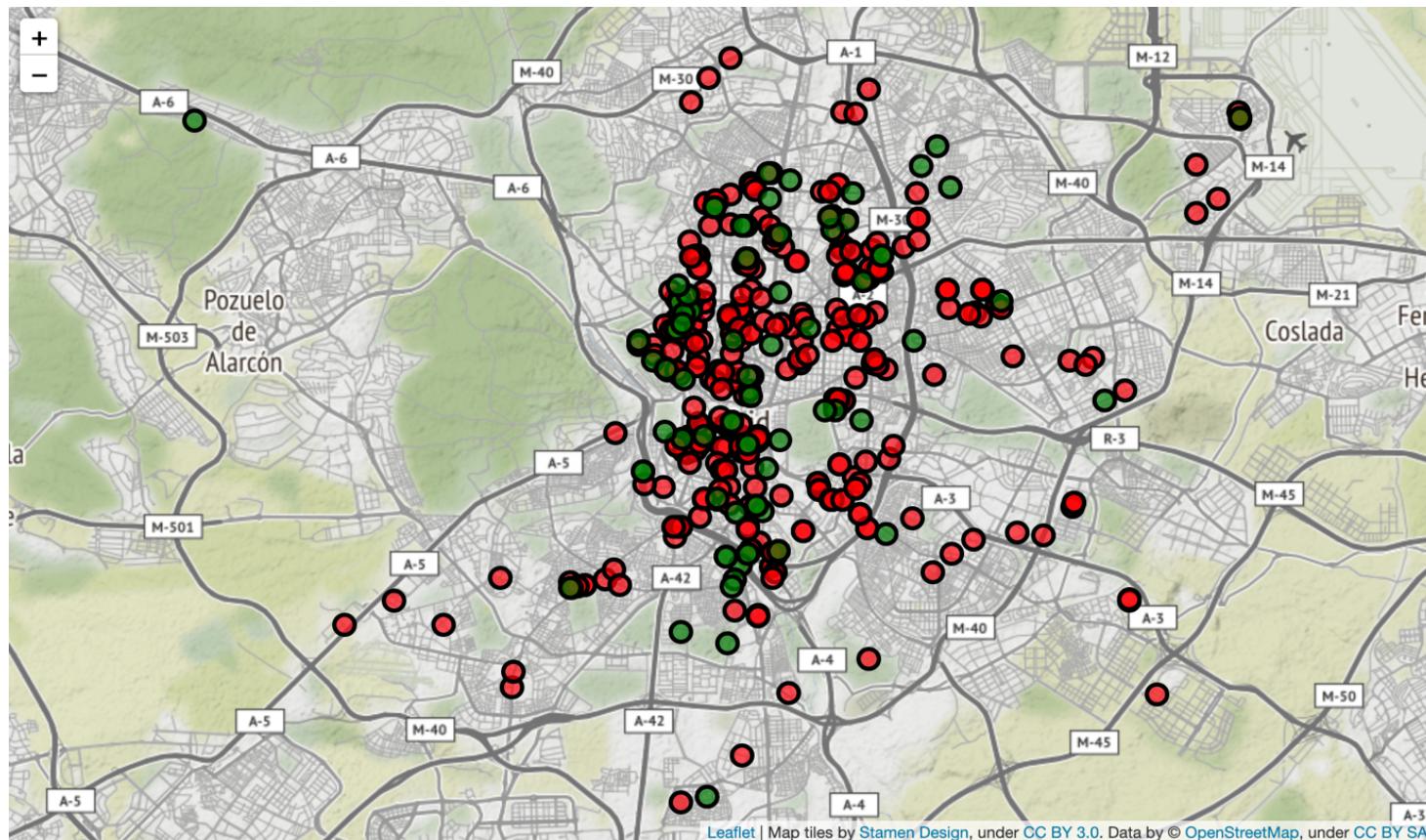
- The list of those venues which should be included in our British/Irish-style pub list are:
- **Beer bar**
- **Gastropub**
- **Pub**
- **Irish Pub**
- **Beer garden**
- And those venues which are selected for competition:
- 
- **Tapas restaurant** - because these are very popular among the Spanish
- **Bar**
- **Wine Bar**

# Counting the Venues

- So let's now count the number of these British/Irish-style pubs in Madrid:
- 
- **Total number of Madrid Bars:** 435
- **The number of Pubs in Madrid:** 79
- **Percentage of Pubs out of all venues in Madrid:** 2.16%
- **Percentage of Pubs out all bars in Madrid** 22.19%

# Pubs and Bars on the Map

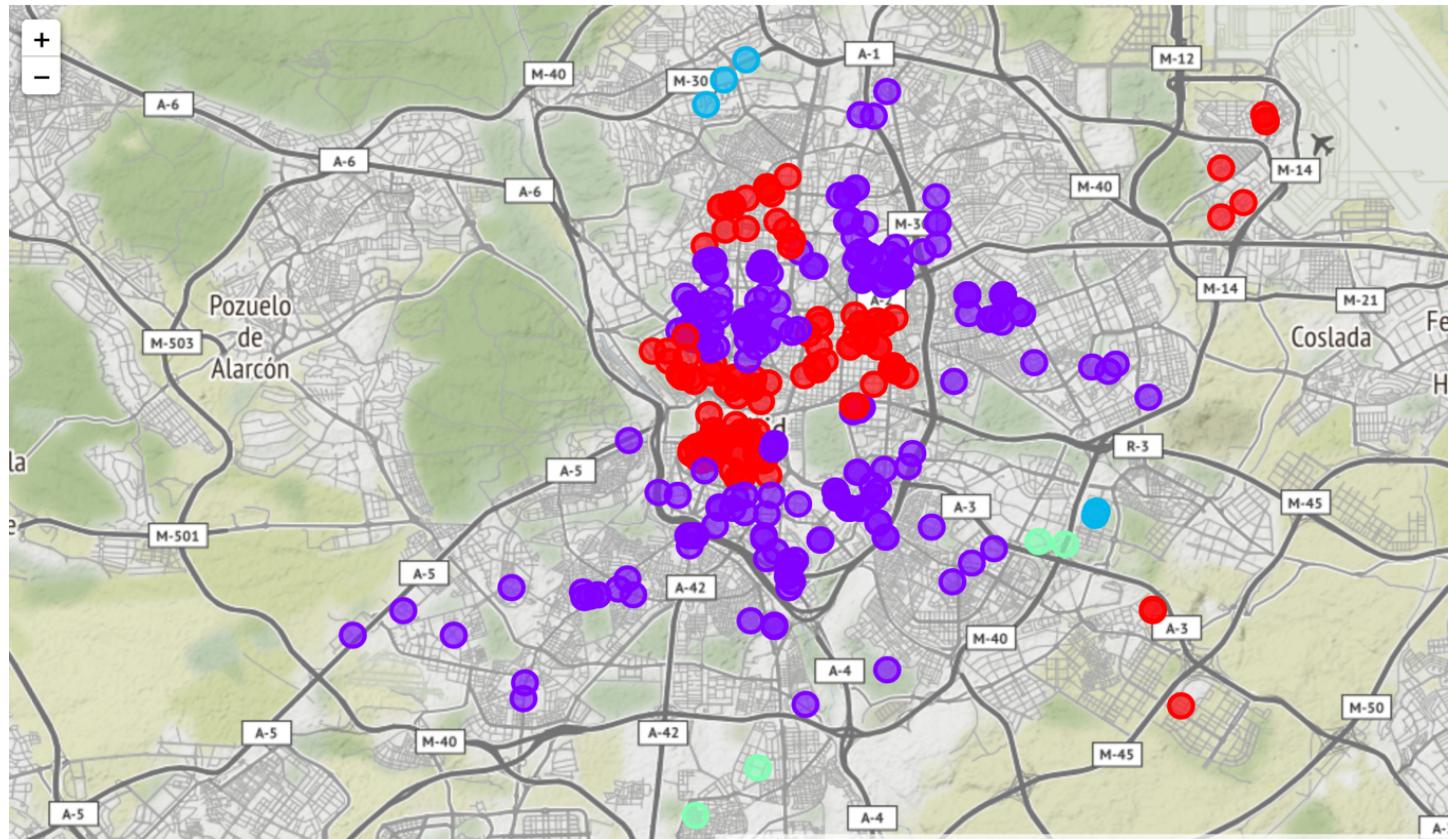
Pubs = Green  
Other Bars = Red



# Clustering

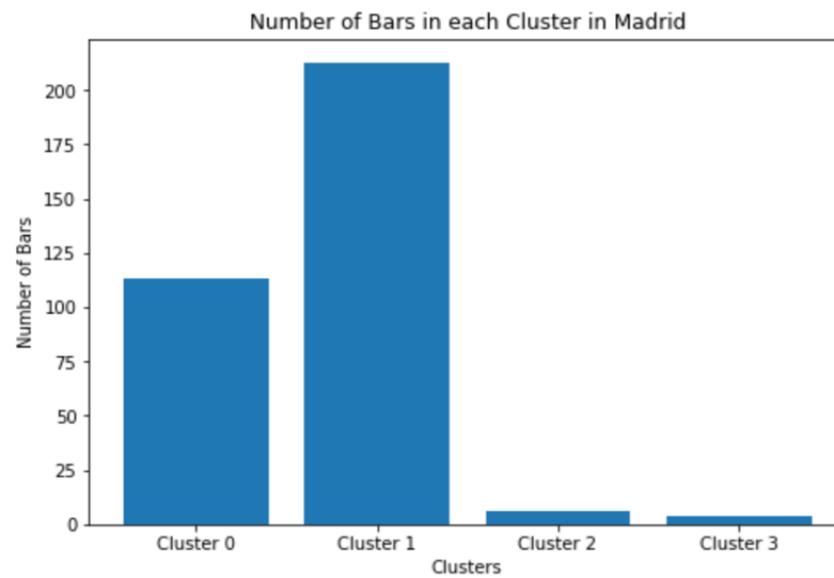
- So now we have used K-Means cluster analysis to see what clusters are present. From looking at the visual from the map, it is clear we have two large clusters and two smaller ones.
- **Cluster 0 = Red**
- **Cluster 1 = Purple**
- **Cluster 2 = Blue**
- **Cluster 3 = Green**

# Clustering



# Counting the Clusters

- Now we can see the percentages of these clusters within Madrid and it is clear that both Cluster 0 and Cluster 1 represent a very high percentage each. Let's generate a bar-graph to help visualise this:



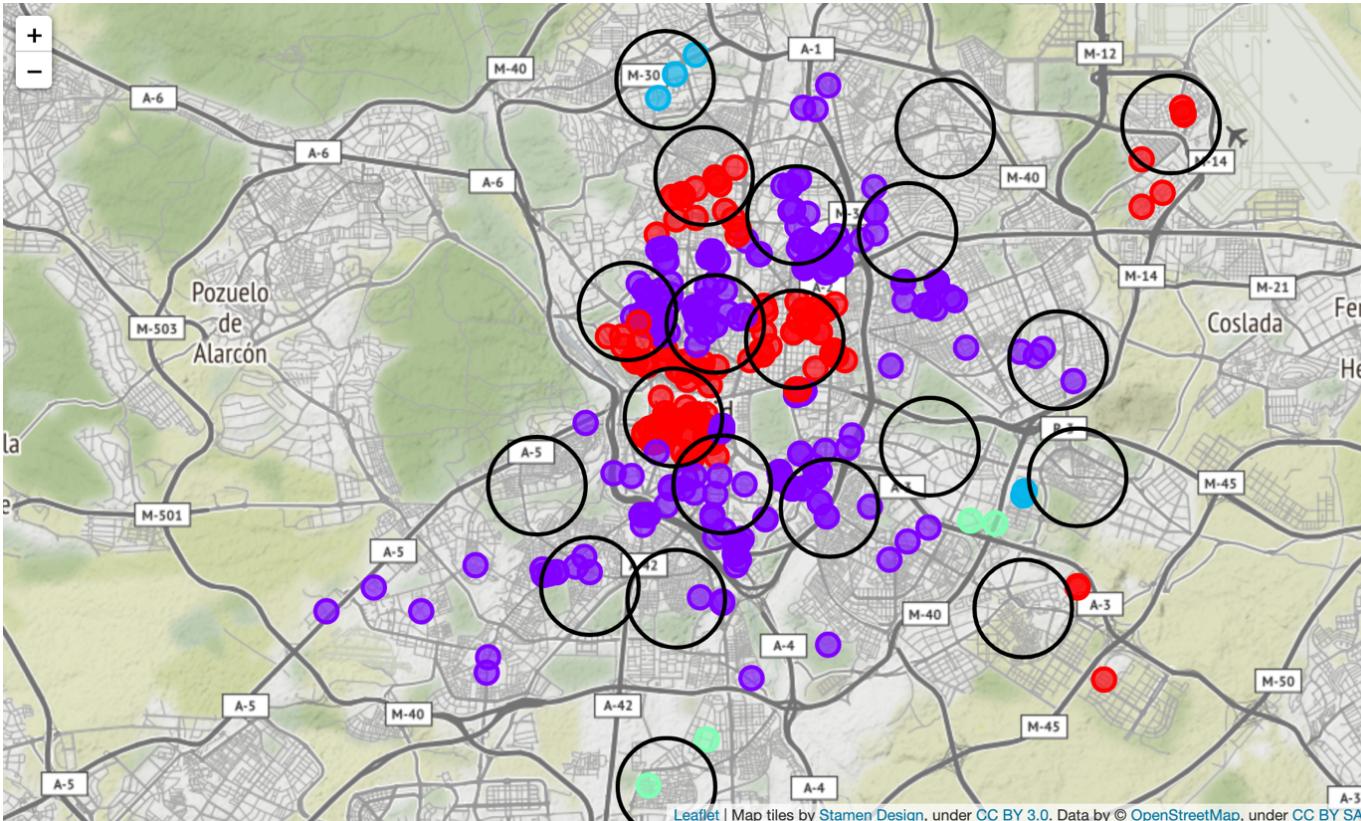
# Cluster Results

- In none of the four clusters do British/Irish-style pubs overtake the other competition in Madrid, in the two major clusters which are closest to the centre of the city, the main competition in Cluster 0 is both a mix of Bar/Wine Bars and Tapas Restaurants, where, in some *Barrios*, Pubs slip out of the picture.
- In Cluster 1, however, Pubs consistently occupied the third position with most competition from either Tapas Bars or normal Bars.

# Most Relevant Clusters

- From the makeup of the Clusters and the type of competition from the paragraph above, let's concentrate on Cluster British/Irish-style pubs in a *Distrito* from Cluster 1.
- The following *Distritos* are:
  - **Chamberí**
  - **Arganzuela**
  - **Retiro**

# Most Relevant Clusters



# Number of Pubs

So now let's see how many pubs are in each of these Distritos

Number of Pubs in Chamberí: 15

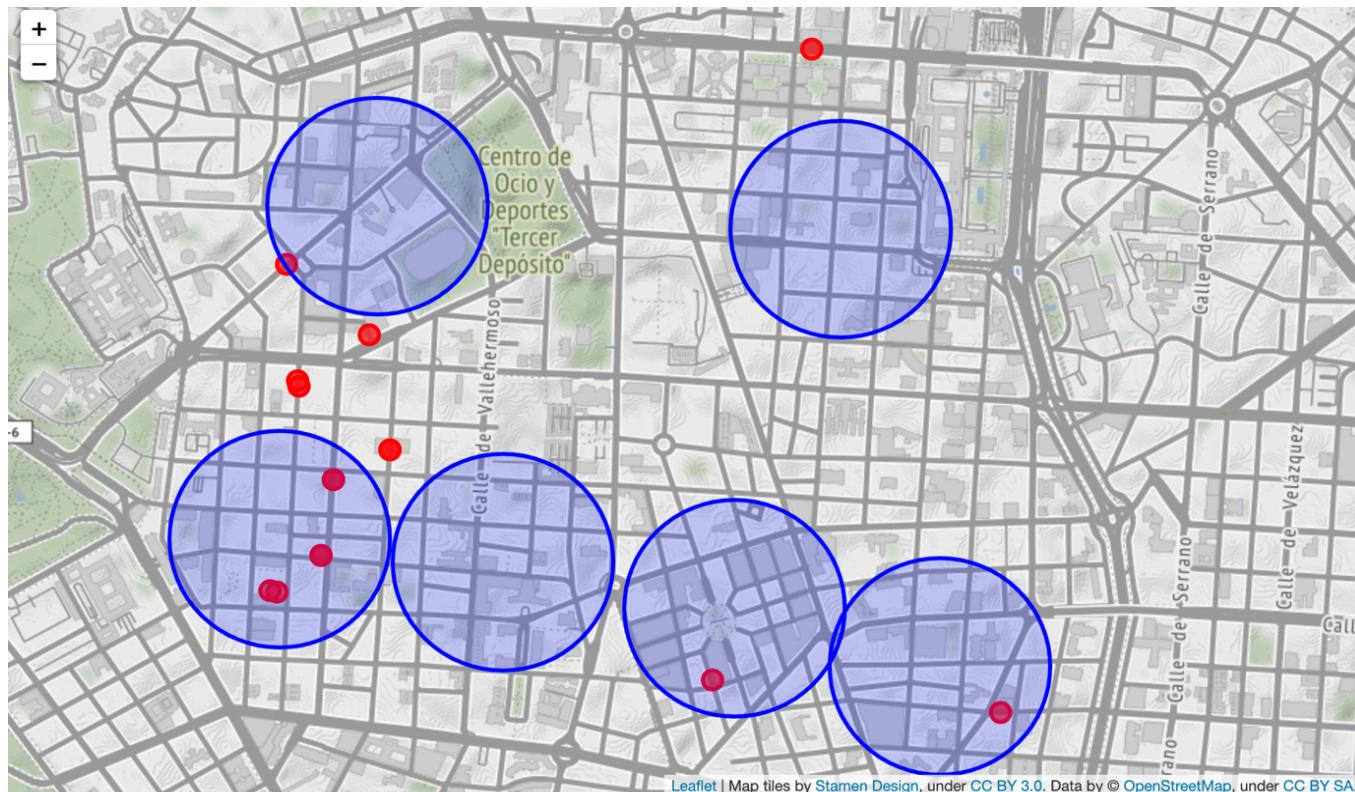
Number of Pubs in Arganzuela: 12

Number of Pubs in Retiro: 4

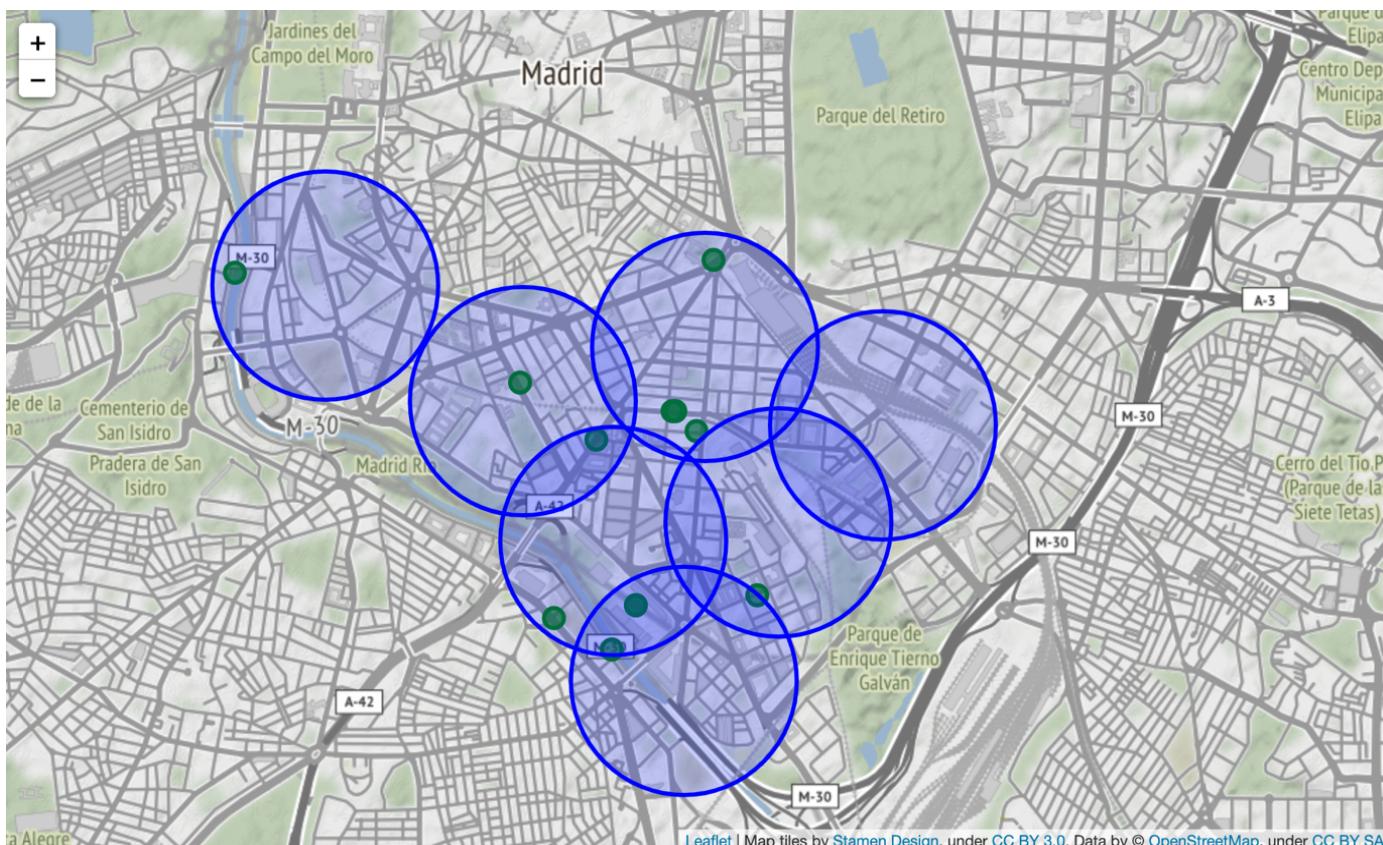
# Distribution of Pubs

- So let's see how densely organised these pubs are in these four *Distritos*
- In Chamberí, there is a cluster of pubs in the *Barrios* of Gaztambide and Vallehermoso whereas the rest are more sparsely distributed.
- In Arganzuela, the pubs are more or less around the *Barrios* of Legazpi, Acacias and Palos de Moguer.
- In Retiro, there are only four pubs, three of which are in the Barrio of Ibiza and the remaining one in Jerónimos.

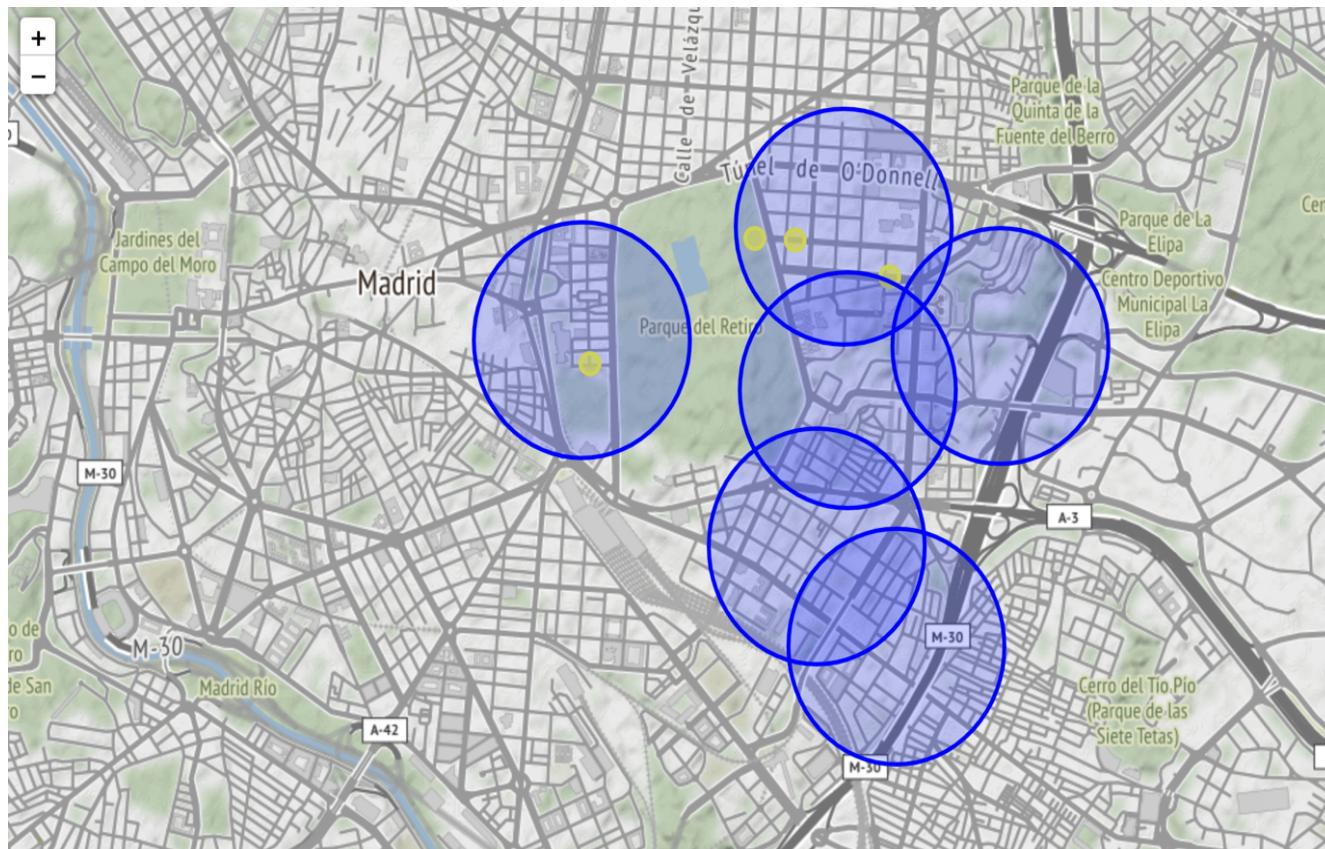
# Pubs in Chamberí



# Pubs in Arganzuela



# Pubs in Retiro



# Results

- From examining the breakdown of each of more popular *Distritos* for pub within the chosen ideal Cluster it shows that either in eastern parts of Chamberí, in the Barrio of Ríos Rosas for example, and the Barrio of Niño Jesús in Retiro would be where a British/Irish-style pub would benefit from both low competition and closeness to the city-centre.

# Conclusion

- The intent and purpose of this project was to determine the ideal location for putting a British/Irish-style pub in the Spanish capital of Madrid. By calculating the distribution of already existing pub alongside their competition, we now have a rough idea of where such a venue would do well.
- The ultimate decision of a pub's location will of course be made by the owners of it, and perhaps they may consider other factors which will require more investigation and analysis, yet this project can be a good base to continue from.