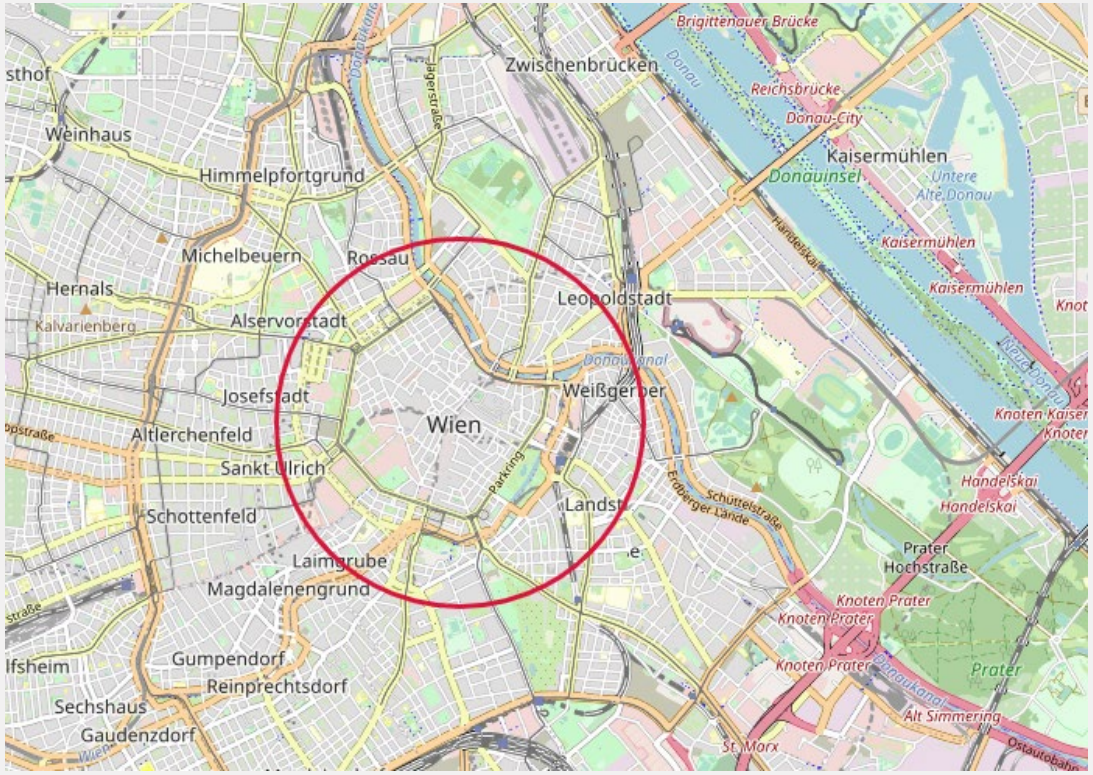
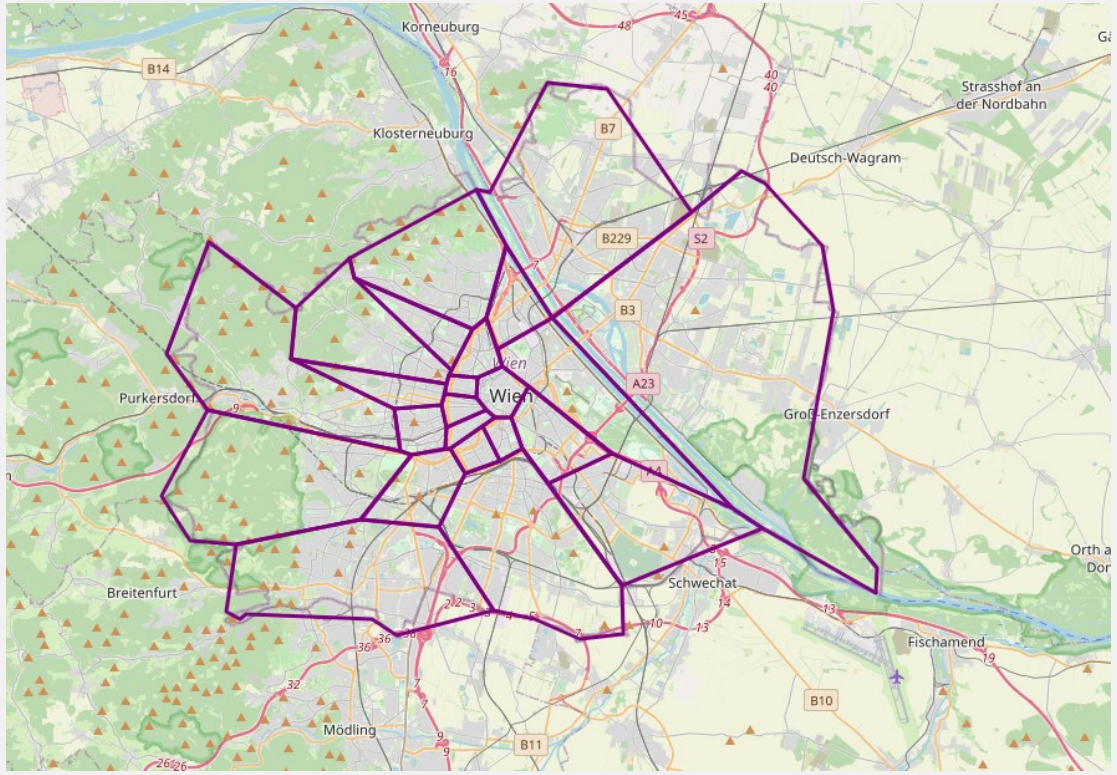
The Battle of Neighborhoods

Selecting the area for the best coffee shop

The first step taken in this project was the selection of the area of interest. This was set as the circle with radius of 1.5 km.



Dividing the area into districts

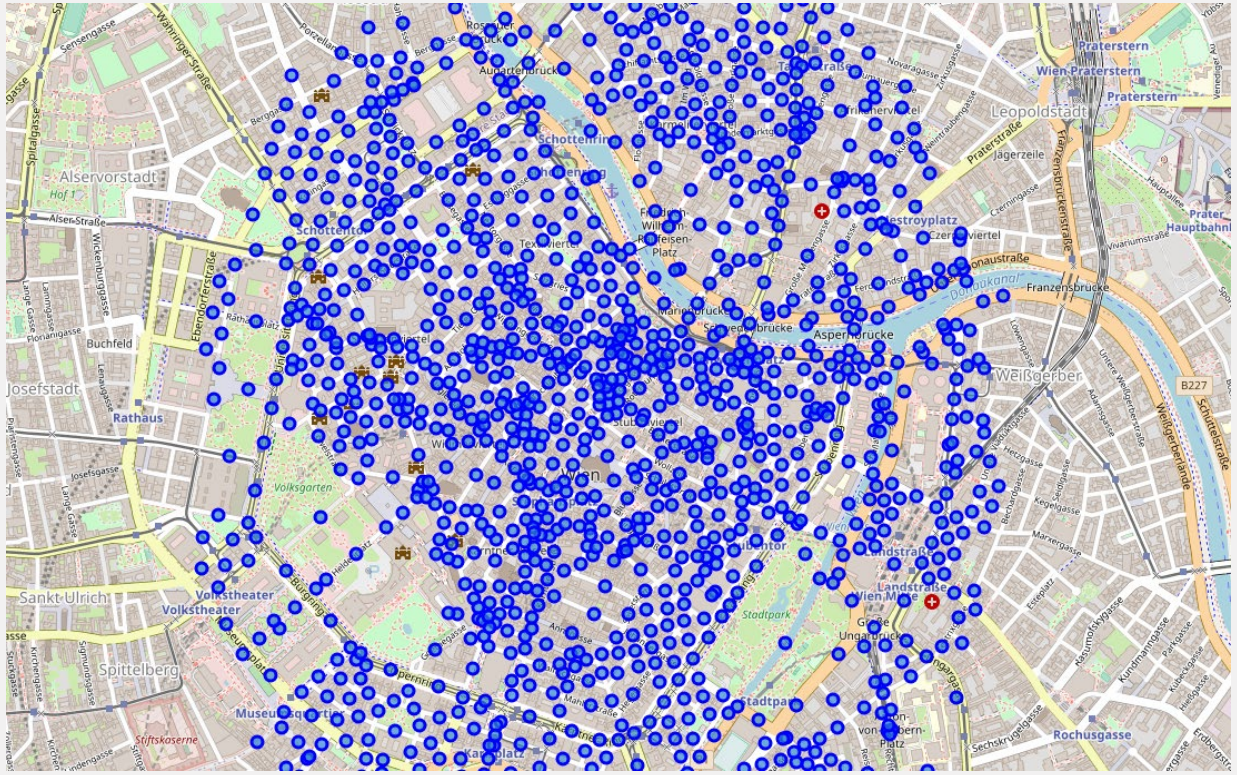


The official GeoJSON database of the districts was then loaded and could be plotted as follows.

Finding the intersection of interest

The intersection of the area of interest with the district dataframe, made possible the filtering out of nearly 70% of the streets database.

Finding the centroids

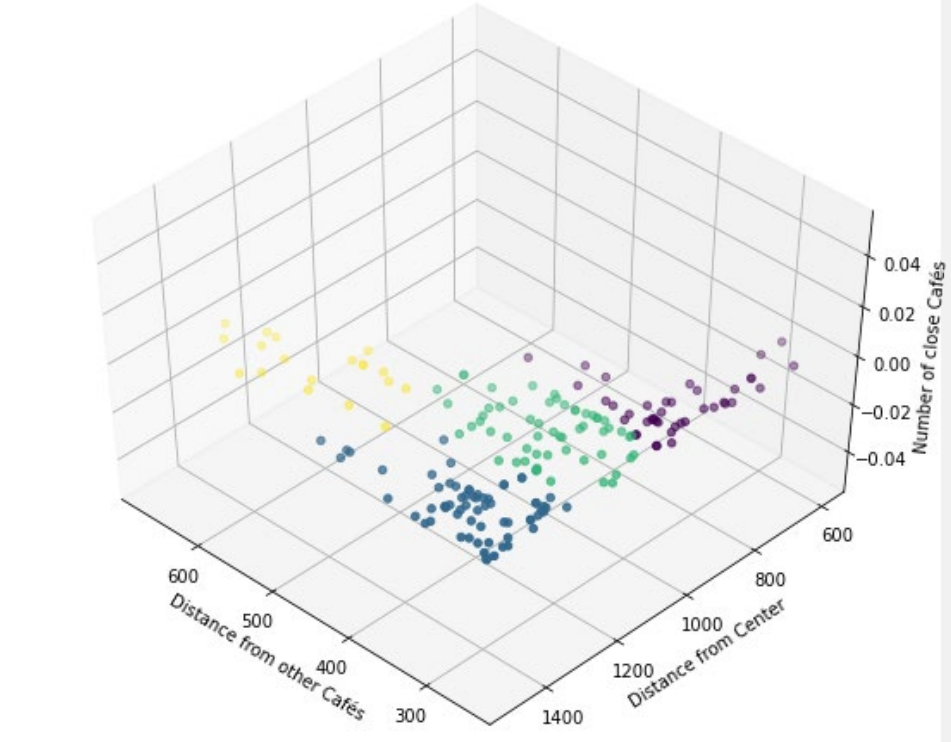


The geometry of the streets was simplified to geometric points. These acted as the centroids from which the distance to all the nearby venues was measured.

Plotting the coffee shop density

After being retrieved, the venues could finally be plotted and a highly accurate heat map was be created.

Selecting the best location candidates



By using the machine learning k-Means Algorithm on the dataframe that was created by using conventional methods of analysis, the follow scatter plot showing the four clusters of the best location candidates was created.

Filtering the final results

The candidate locations of the yellow cluster meet the criteria in the best way. The location points of this area could be finally ploted