



Coursera Capstone Project

Battle of the Neighborhoods

– Differences between Hamburg Districts

Introduction/Business Problem

Hamburg consists of 7 districts, of which the districts of Altona, Wandsbek and Harburg, among others, came to Hamburg by the Greater Hamburg Act in 1937.

All three were independent cities before they were incorporated.

My aim is it to analyze how these three districts differ today by examine what are the most frequent venues in their most and least urban neighborhoods.

As one of the most liked type of restaurant in Germany are Italian Restaurants, I also want to give a recommendation which neighborhood in which district would be the best location for opening up an Italian Restaurant.

Data / Foursquare data

I am going to use Foursquare data to find all the popular venues of the city. This dataset will give me the name, category, latitude and longitude of each venue within a given radius around the neighborhoods and districts of interest.

	Neighbourhood	Neighbourhood Latitude	Neighbourhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Hamburg-Altstadt	53.54992	9.99893	GOOT - Finest Cuts	53.548509	10.000675	Comfort Food Restaurant
1	Hamburg-Altstadt	53.54992	9.99893	O-ren Ishii	53.548291	9.997890	Vietnamese Restaurant
2	Hamburg-Altstadt	53.54992	9.99893	Picasso	53.549934	9.995627	Spanish Restaurant
3	Hamburg-Altstadt	53.54992	9.99893	Thalia Theater	53.551897	9.998384	Theater
4	Hamburg-Altstadt	53.54992	9.99893	Mi Chii	53.548320	9.998530	Vietnamese Restaurant

Data of Hamburg Districts

The names and geolocation data for the neighborhoods of Hamburg can be obtained from the German Wikipedia page of the districts and neighborhoods of Hamburg:

https://de.wikipedia.org/wiki/Liste_der_Bezirke_und_Stadtteile_Hamburgs

It is the second table on this page .

This information can only be gathered from the german page , because it is not included in the English equivalent at

https://en.wikipedia.org/wiki/Boroughs_and_quarters_of_Hamburg

Most and least urban neighborhoods in Hamburg

The data provided at the German Wikipedia page is particularly useful, as it provides the density of population of each neighborhood („Bevölkerungsdichte (Einwohner/km²)“) which I take as indicators if a neighborhood has a more or less urban character.

Stadtteil	Ortsteile	Bezirk	Fläche (km ²)	Einwohner	Bevölkerungsdichte (Einwohner/km ²)	Koordinaten	Karte
Hamburg-Altstadt	101–102	Hamburg-Mitte	2,4	2272	947	δ 53° 33' 0" N, 10° 0' 0" O	
HafenCity	103–104	Hamburg-Mitte	2,2	4592	2087	δ 53° 32' 28" N, 10° 0' 1" O	
Neustadt	105–108	Hamburg-Mitte	2,3	12.920	5617	δ 53° 33' 7" N, 9° 59' 8" O	
St. Pauli	109–112	Hamburg-Mitte	2,5	22.436	8974	δ 53° 33' 25" N, 9° 57' 50" O	
St. Georg	113–114	Hamburg-Mitte	2,4	11.384	4743	δ 53° 33' 18" N, 10° 0' 44" O	
Hammerbrook	115–118	Hamburg-Mitte	3,0	4323	1441	δ 53° 32' 43" N, 10° 1' 50" O	
Borgfelde	119–120	Hamburg-Mitte	0,8	7696	9620	δ 53° 33' 17" N, 10° 2' 4" O	
Hamm	121–127	Hamburg-Mitte	4,0	38.773	9693	δ 53° 33' 39" N, 10° 3' 28" O	
Horn	128–129	Hamburg-Mitte	5,9	38.799	6576	δ 53° 33' 14" N, 10° 5' 24" O	

Geo location Data

However, the geo location data is provided in Degree, Minute, Second format, so that the decimal coordinates are added via geocoder for the sake of simplicity.

	Neighborhood	District	Population	Density	Latitude	Longitude
0	Hamburg-Altstadt	Hamburg-Mitte	2272.000	947	53.54992	9.99893
1	HafenCity	Hamburg-Mitte	4592.000	2087	53.54444	9.99762
2	Neustadt	Hamburg-Mitte	12.920	5617	53.55479	9.98999
3	St. Pauli	Hamburg-Mitte	22.436	8974	53.55700	9.96400
4	St. Georg	Hamburg-Mitte	11.384	4743	53.55513	10.01231
5	Hammerbrook	Hamburg-Mitte	4323.000	1441	53.54623	10.02416
6	Borgfelde	Hamburg-Mitte	7696.000	9620	53.55226	10.03473
7	Hamm	Hamburg-Mitte	38.773	9693	53.56067	10.05519
8	Horn	Hamburg-Mitte	38.799	6576	53.55489	10.08739