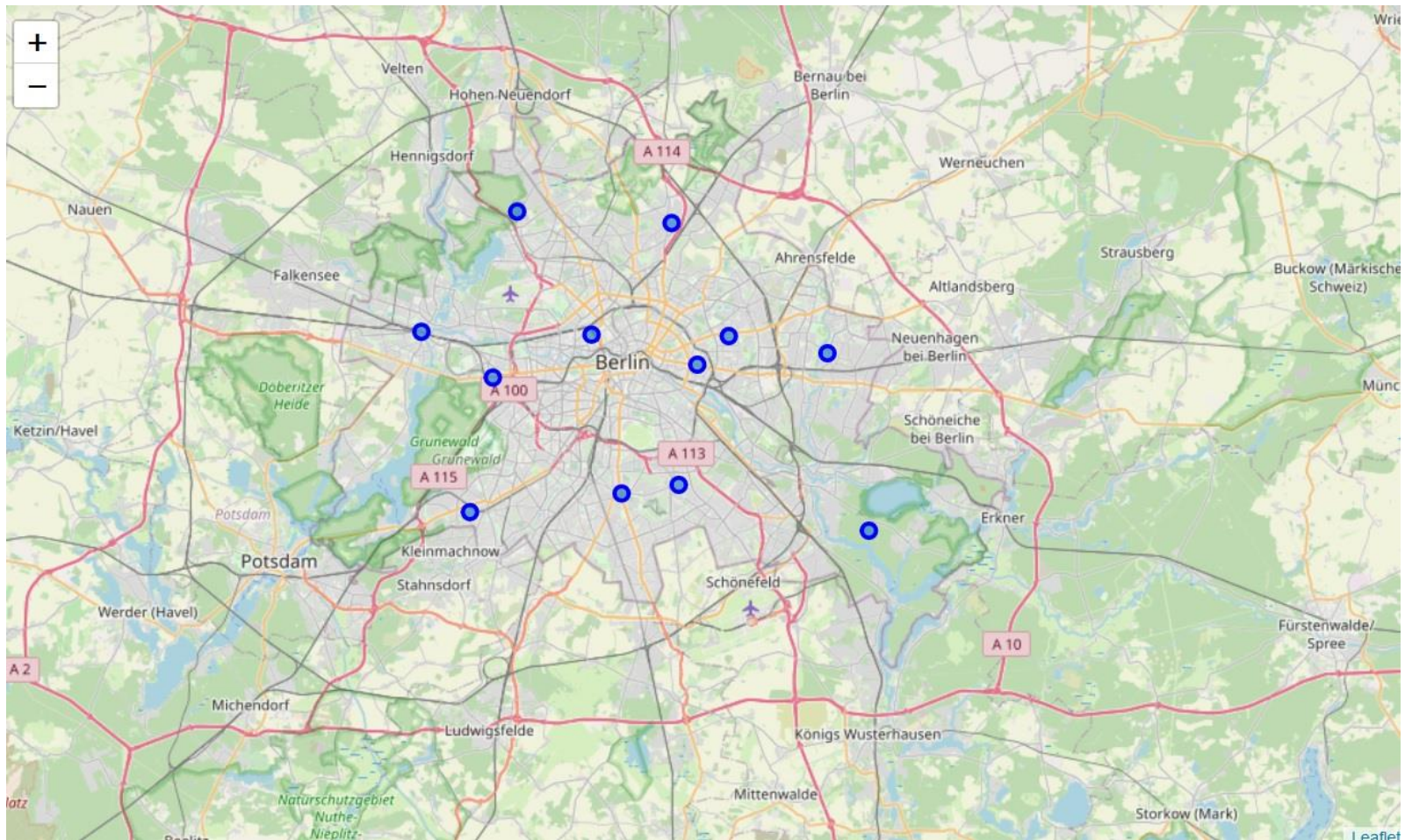


Berlin cafe or bakery

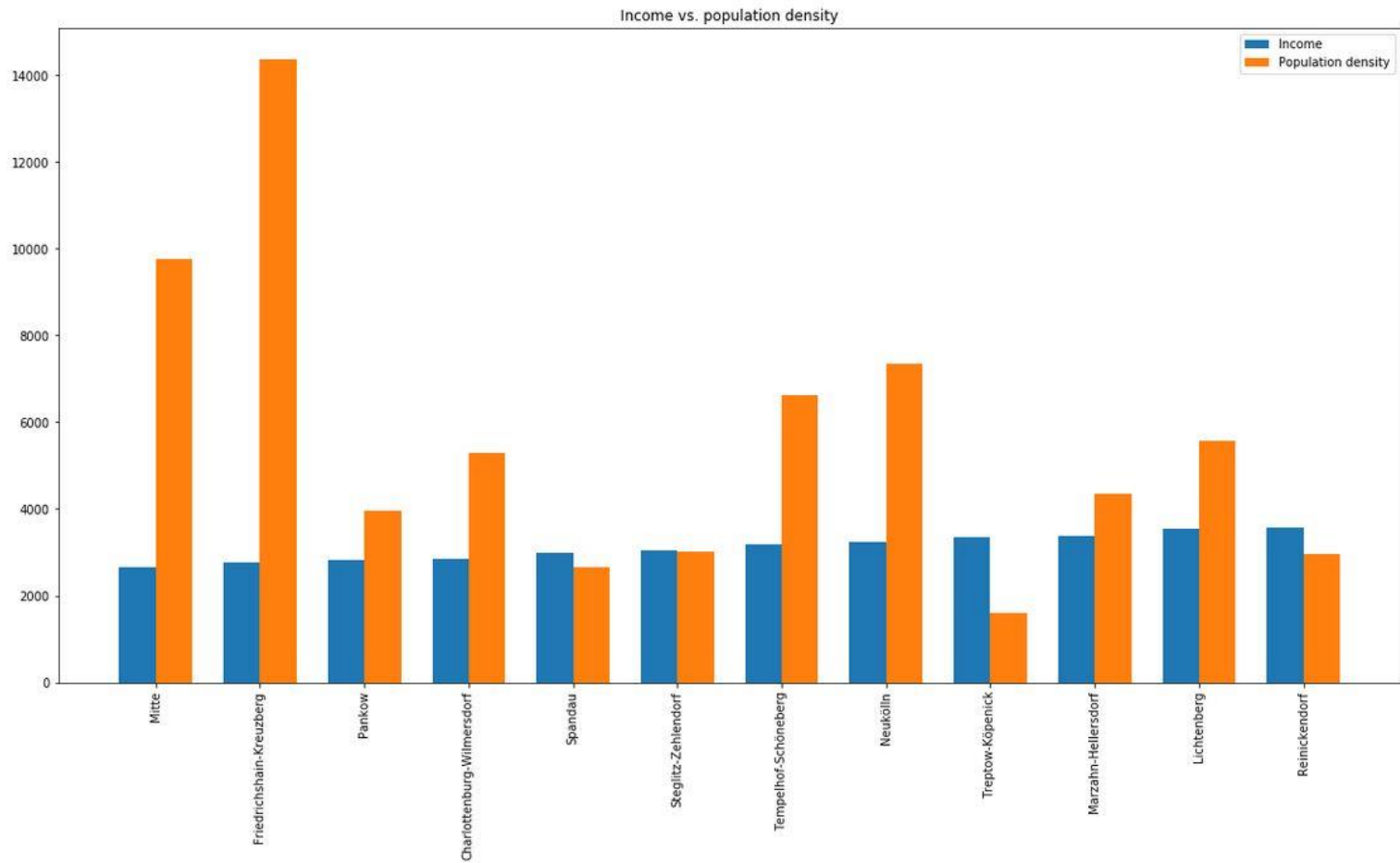
# Centers of boroughs in Berlin



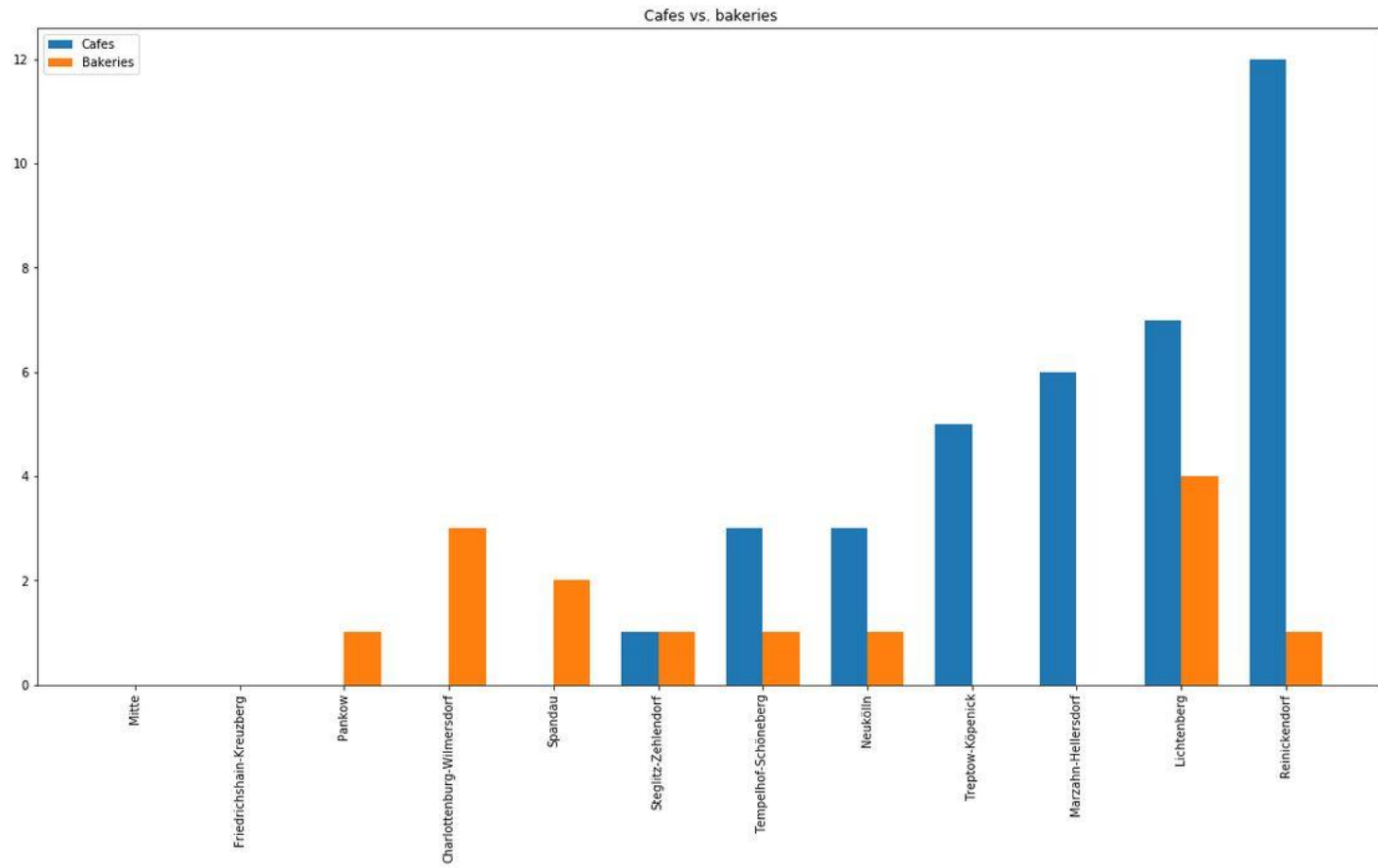
# Number of venues in Foursquare

	Borough	population	unemployed	income	pop_dens	lat	long	Number of cafes	Number of bakeries
0	Mitte	329372	78525	3224	9773	52.533216	13.359796	7	0
1	Friedrichshain-Kreuzberg	255551	47173	3375	14373	52.515306	13.461612	12	0
2	Pankow	342152	32405	3358	3958	52.597637	13.436374	1	1
3	Charlottenburg-Wilmersdorf	260040	31792	3573	5289	52.507856	13.263952	5	3
4	Spandau	188909	46611	2761	2655	52.534769	13.195629	3	2
5	Steglitz-Zehlendorf	228052	19531	3553	3012	52.429591	13.242024	6	1
6	Tempelhof-Schöneberg	275919	47451	3194	6625	52.440442	13.388289	0	1
7	Neukölln	271521	71203	2855	7338	52.445432	13.443460	0	1
8	Treptow-Köpenick	205326	26189	3041	1610	52.417988	13.626403	0	0
9	Marzahn-Hellersdorf	214913	43276	2647	4350	52.522464	13.585384	0	0
10	Lichtenberg	229916	41882	2810	5574	52.531874	13.490772	3	4
11	Reinickendorf	201086	44563	2984	2965	52.604847	13.288141	0	1

# Income vs. Population density



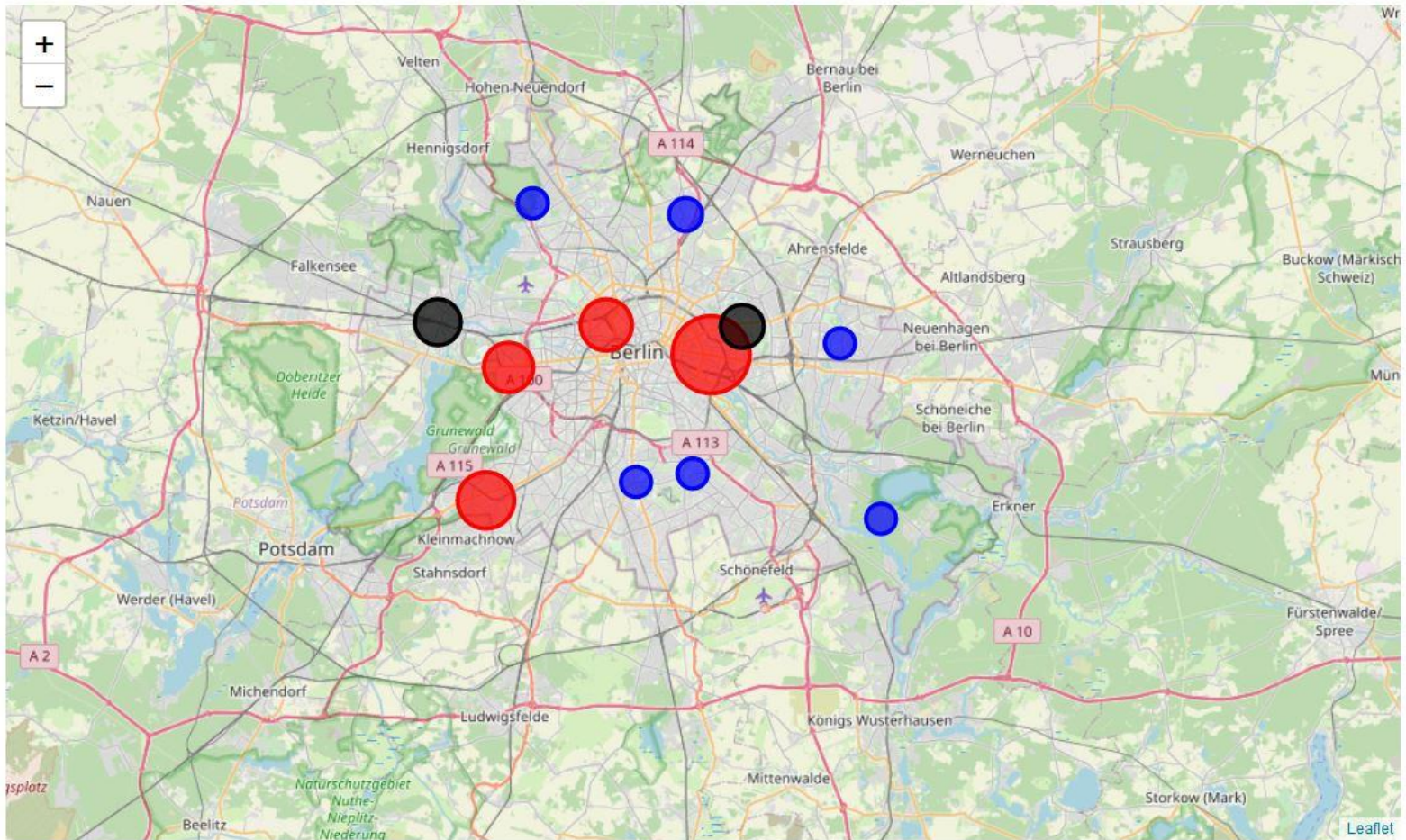
# Number of cafes and bakeries in different parts of the city





# Clusters

(the radius of the Circle marker is proportional to a Net income per person in each borough)



Cluster Labels		Borough	population	unemployed	income	pop_dens	lat	long	Number of cafes	Number of bakeries
0	0	Mitte	329372	78525	3224	9773	52.533216	13.359796	7	0
1	0	Friedrichshain-Kreuzberg	255551	47173	3375	14373	52.515306	13.461612	12	0
2	2	Pankow	342152	32405	3358	3958	52.597637	13.436374	1	1
3	0	Charlottenburg-Wilmersdorf	260040	31792	3573	5289	52.507856	13.263952	5	3
4	1	Spandau	188909	46611	2761	2655	52.534769	13.195629	3	2
5	0	Steglitz-Zehlendorf	228052	19531	3553	3012	52.429591	13.242024	6	1
6	2	Tempelhof-Schöneberg	275919	47451	3194	6625	52.440442	13.388289	0	1
7	2	Neukölln	271521	71203	2855	7338	52.445432	13.443460	0	1
8	2	Treptow-Köpenick	205326	26189	3041	1610	52.417988	13.626403	0	0
9	2	Marzahn-Hellersdorf	214913	43276	2647	4350	52.522464	13.585384	0	0
10	1	Lichtenberg	229916	41882	2810	5574	52.531874	13.490772	3	4
11	2	Reinickendorf	201086	44563	2984	2965	52.604847	13.288141	0	1

## Conclusion

Foursquare doesn't represent the full picture in Germany, since many venues are not on the list. Boroughs have too complex geometry, thus defining the closest venues within the certain radius brings additional error to our analysis.