Guide to the neighborhoods of Düsseldorf

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Agenda

◈ Introduction

◈ Data Description

◈ Exploratory Data Analysis

◈ Modelling

◈ Conclusion

Introduction

Düsseldorf …

◈ … is the 7th largest city of Germany

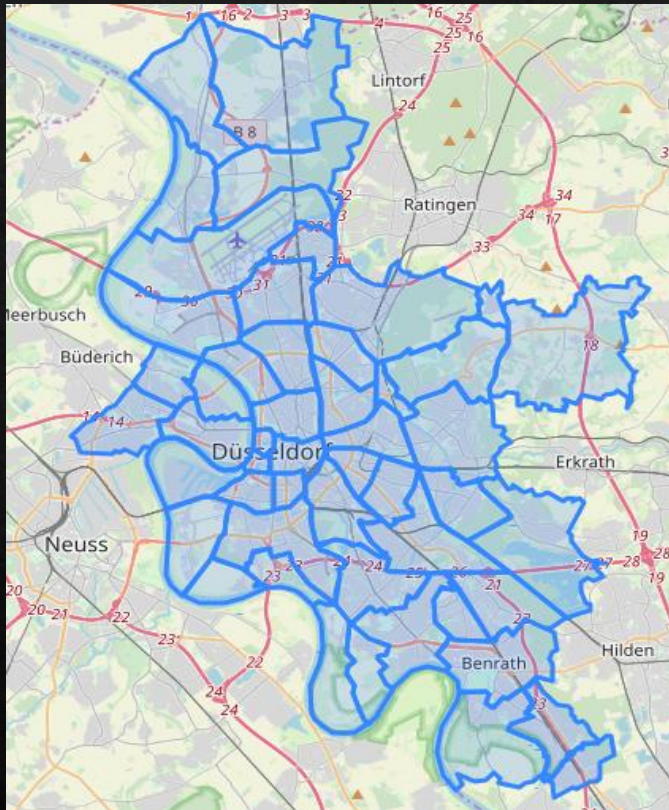◈ … is one of the global top 10 cities worth living in

If you would like to move to Düsseldorf – Where would you like live within the city?

How many neighborhoods are there? Which neighborhood is offering what? Which are the most popular neighborhoods?
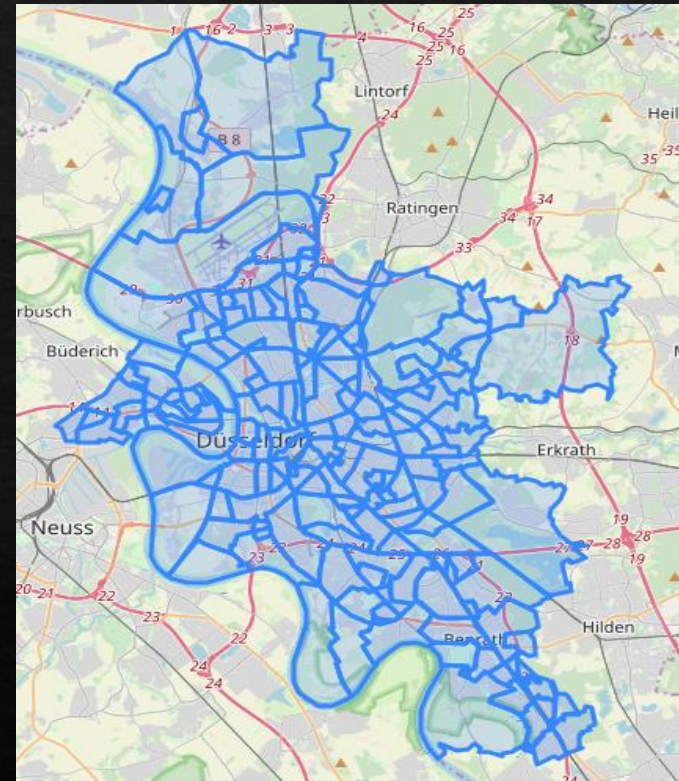
→ This project aims to provide a clustering of the different neighborhoods based on selected social and urban design specific indicator
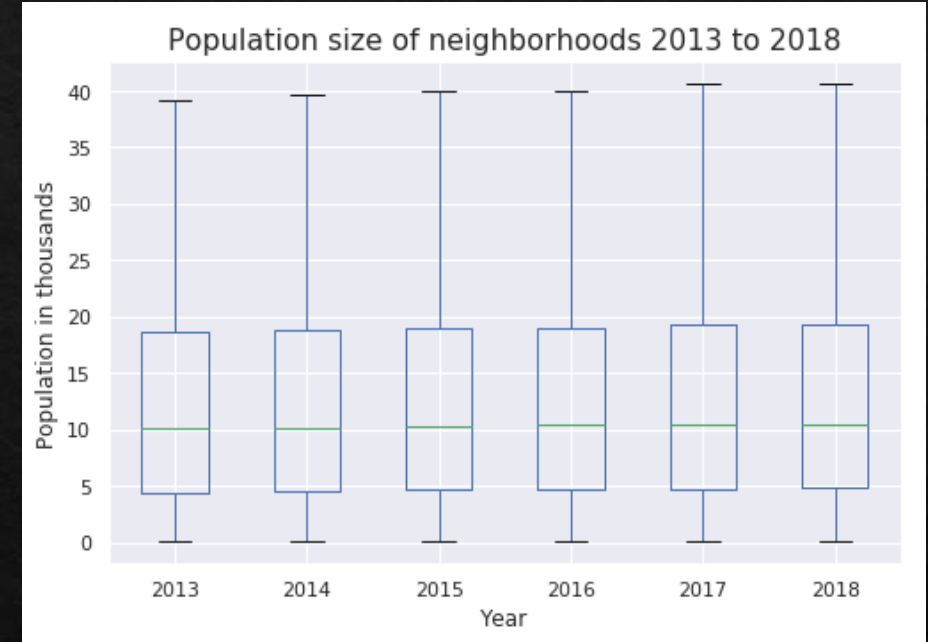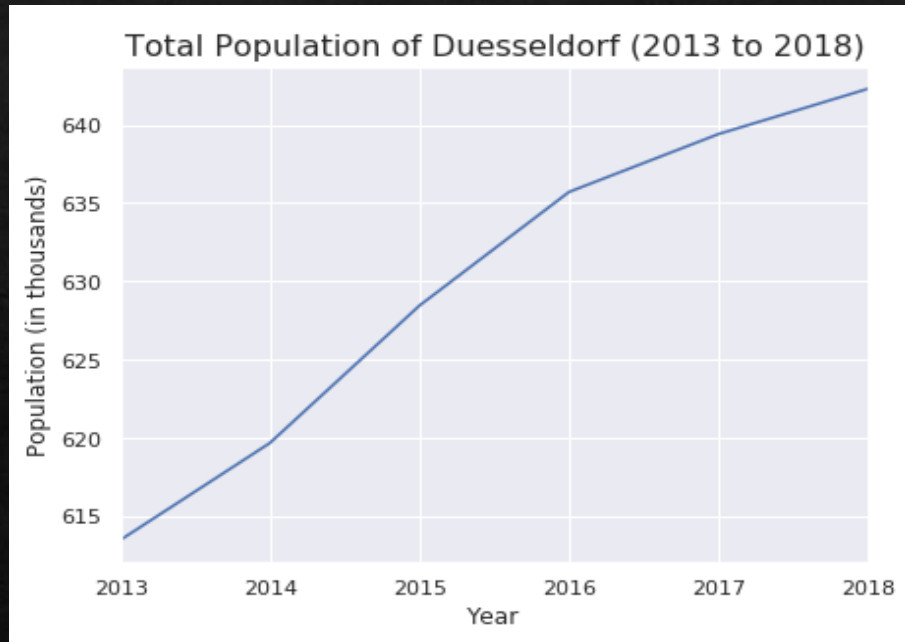
Structure
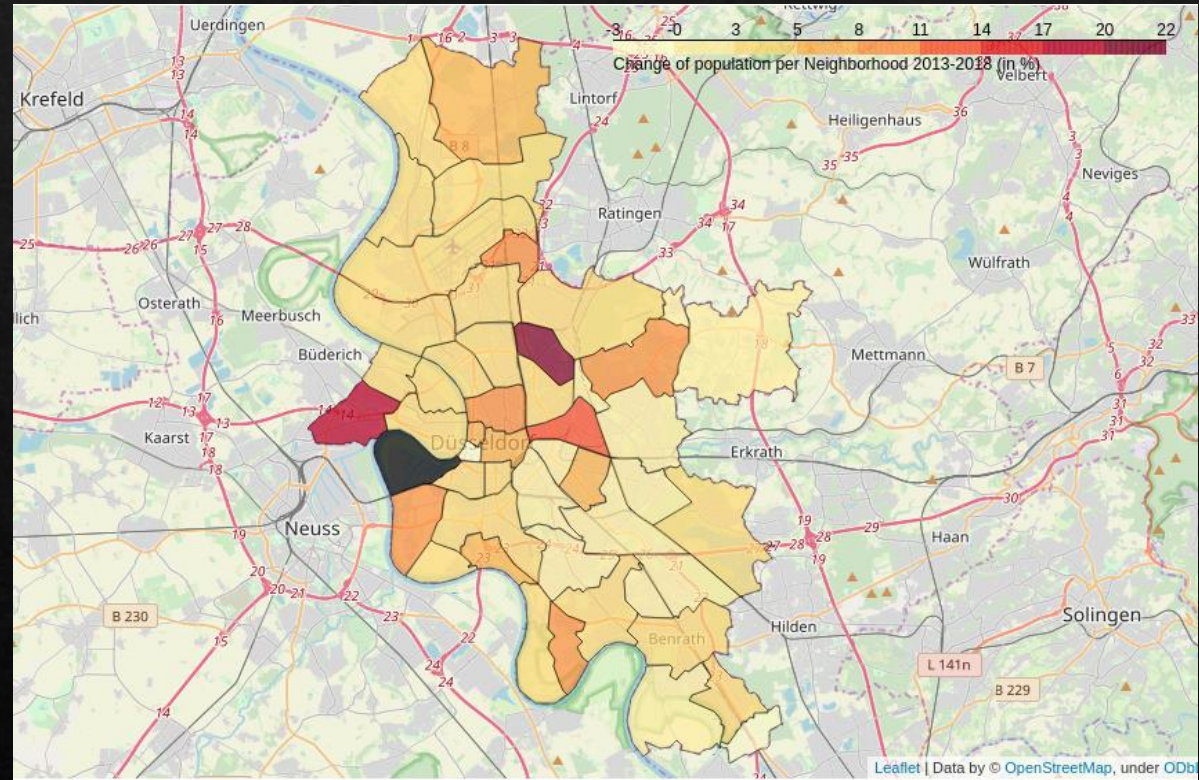
50 Neighborhoods

179 Social Areas

Population

Total Population of Duesseldorf (2013 to 2018)

Population size of neighborhoods 2013 to 2018

◇ Constant growth over the last five years

◇ Total population increased from 614 thousand to 643 thousand (+4.7%)

◇ Population per neighborhood between 1,000 and 40,000 residents
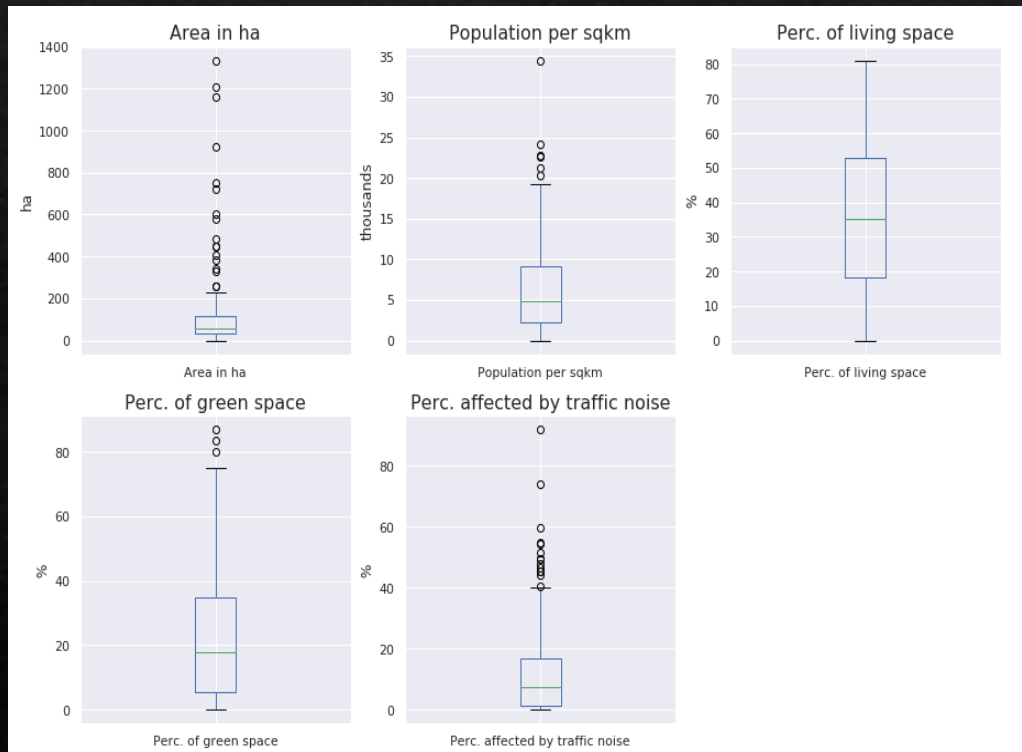
Most and least popular neighborhoods

◈ Most popular:
 ◇ Mörsenbroich
 ◇ Flingern Nord
 ◇ Heerdt

◈ Least popular:
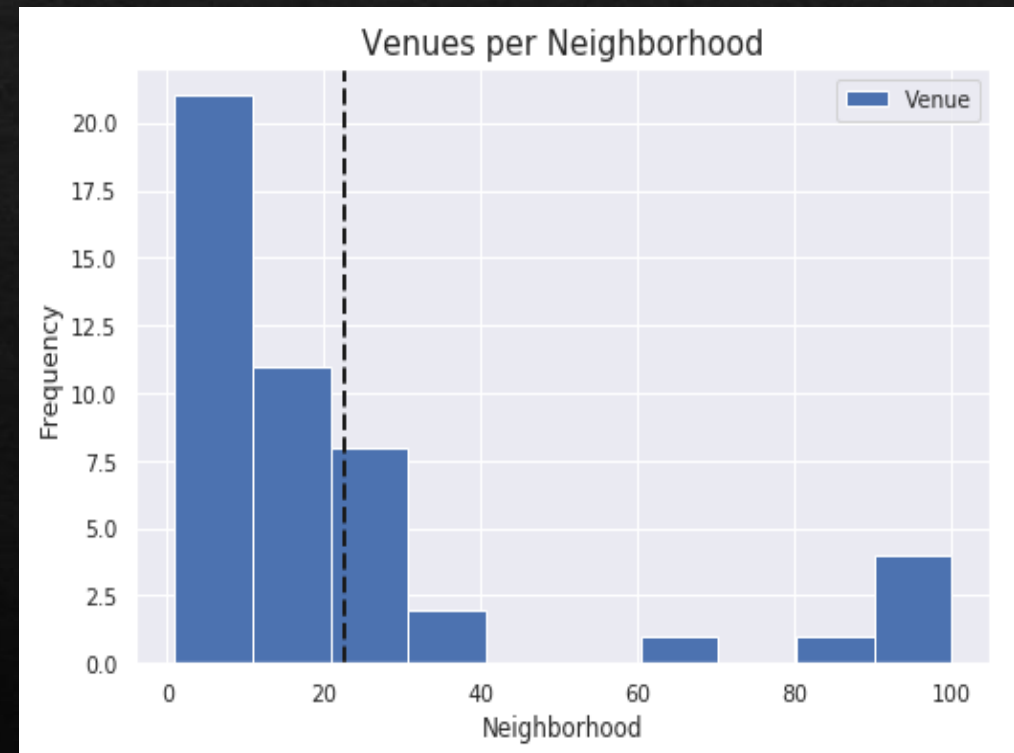 ◇ Hellerhof
 ◇ Carlstadt

◈ Assessment based on growth / reduction of population 2013 to 2018 and trend in last two years

Social and Environmental Characteristics

Characteristics of Social Areas

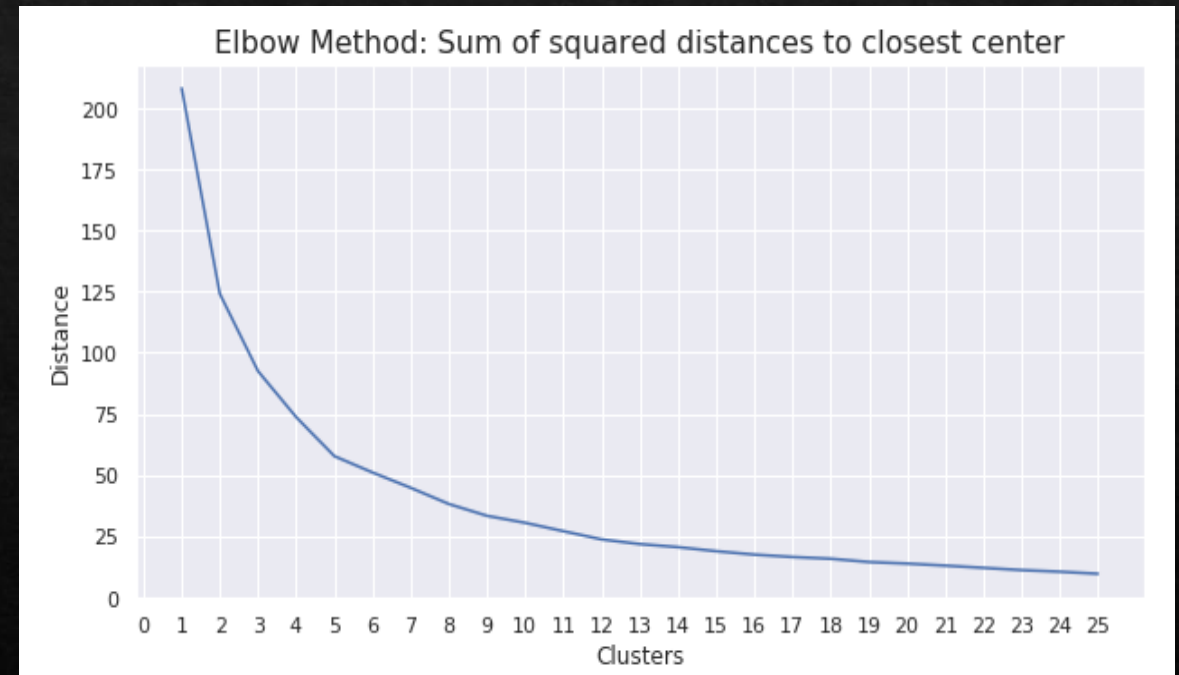## Number of Venues

◈ Lots of outliers in the different characteristics (features) of the social areas of Düsseldorf

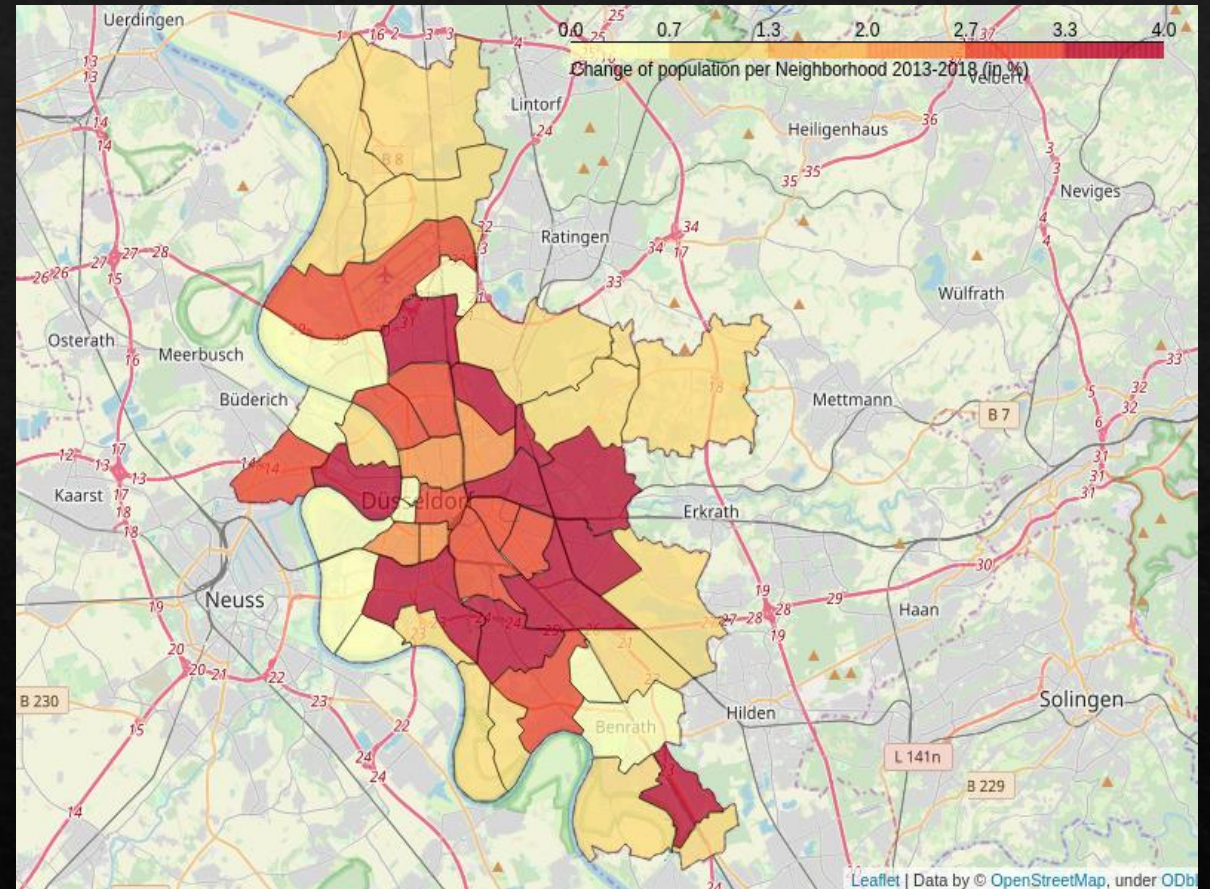◈ Neighborhoods provide varying living experience and number activities

Clustering of Neighborhoods

◈ Clustering of Neighborhoods according to KMeans Model

◈ Elbow suggestes best fit with five clusters

Elbow Method: Sum of squared distances to closest center

Neighborhood Clusters

Cluster	Description
0	Assumably lots of stores, businesses and even industry, as living and green space only make for about 35% of the overall space. Top venues do include only very minor public / cultural sights.
1	Very green with lots of green spaces, Beaches and Sport Areas. Only few venues for going out, such as bars or restaurants.
2	Very crowded, most dense population per sqkm and highest share of living space. Lots of venues for Food & Drink and Bars.
3	Very noisy and assumably lots of stores, businesses and Hotels.
4	Around two thirds of area is made of living and green space, while medium density of population per sqkm. Potentially more spaceous houses and flats than in Cluster 2. Lots of venues for Food & Drink and Italian restaurants, but also natural sites.

Conclusion

◈ Mörsenbroich and Flingern Nord, two of the three strongest growing neighorhoods of Düsseldorf are part of Cluster 4, providing a potentially interesting mix of living and green space. It will be interesting to see, how especially the percentage of green space will develop over time, as a growing population demands additional living spaces. Herdt being less crowded but stronger affected by traffic noise, is part of cluster 3.

◈ Hellerhof, being the neighborhood with the strongest absolute decrease in population is part of Cluster 1, which might still be an interesting living area judging from the facts at hand: near to the city, but still green and very low traffic noises.