

Recommending Borough for moving people

The Battle of Neighborhoods (Week 2)

19th of Jan 2021



Business Problem

- Recommend suitable areas for the Lee's family who are moving to Hannover
- Lee wants to have in his neighborhood:
Park, Cafe, Restaurant, Market

Required Data for Analysis

1. Average price per m² of the apartments in Hannover:
<https://mietspiegeltabelle.de/mietspiegel-hannover>
2. Information about the venues in all boroughs of Hannover:
<https://www.suche-postleitzahl.org/hannover-plz-30159-30669.45d1>

Analysis of Price of Apartments in Hannover

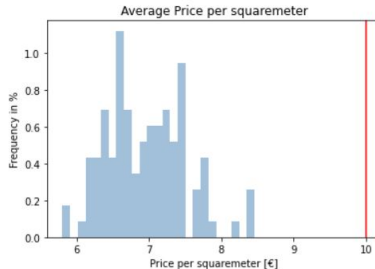


Figure 1: Frequency of price per m^2 in Hannover

- Lee can move anywhere, as all of the boroughs have a lower price than target

Analysis of Price Distribution Across Boroughs of Hannover

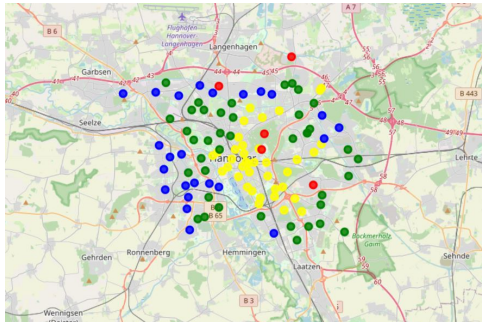


Figure 2: Price distribution across Hannover

Analysis of Venue Distribution Across Hannover

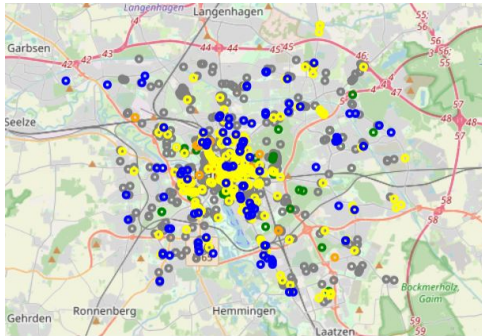


Figure 3: Venues across boroughs in Hannover

Boroughs of Hannover with Most of Venues of Interest

	Neighborhood	Parks	Cafés	Markets	Restaurants	FavoriteScore
27	Mitte	2	20	7	61	0.196507
37	Südstadt	3	3	8	29	0.093886
30	Nordstadt	2	8	4	17	0.067686
20	Linden-Mitte	1	2	1	10	0.030568

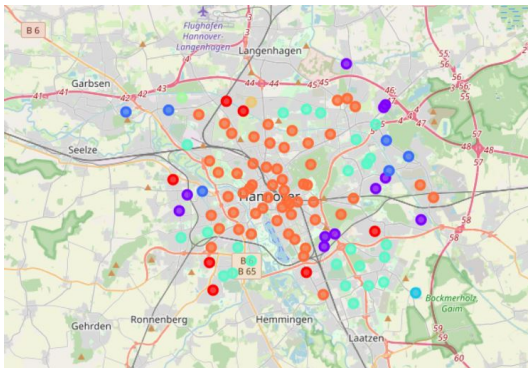
$$\text{Favorite score} = \frac{\sum \text{Venues in this borough}}{\sum \text{All venues}}$$

Most Common Venues in Boroughs of Hannover

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	Ahlern	Bakery	Zoo	Friterie	Fountain	Food Court	Food & Drink Shop	Flower Shop	Field	Exhibit	Electronics Store
1	Anderten	Pool	Donut Shop	Fountain	Food Court	Food & Drink Shop	Flower Shop	Field	Exhibit	Electronics Store	Discount Store
2	Badenstedt	Tram Station	Bakery	Gastropub	Sports Club	Electronics Store	Fountain	Food Court	Food & Drink Shop	Flower Shop	Field
3	Bemerode	Tram Station	Insurance Office	Beer Store	Electronics Store	Shipping Store	IT Services	Metro Station	Pizza Place	Wine Shop	Deli / Bodega
4	Bornum	Big Box Store	Hotel	Arts & Crafts Store	Intersection	Zoo	Exhibit	Friterie	Fountain	Food Court	Food & Drink Shop
5	Bothfeld	Soccer Field	Discount Store	Tram Station	Steakhouse	Ice Cream Shop	Bus Stop	Hotel	Deli / Bodega	Creperie	Department Store
6	Brink-Hafen	Construction & Landscaping	Business Service	Hardware Store	Electronics Store	Friterie	Fountain	Food Court	Food & Drink Shop	Flower Shop	Field
7	Bult	Tram Station	Bakery	Sports Club	Miscellaneous Shop	Hotel	Concert Hall	Soccer Field	Gym / Fitness Center	Gas Station	Spa
8	Burg	Bus Stop	Zoo	Electronics Store	Friterie	Fountain	Food Court	Food & Drink Shop	Flower Shop	Field	Exhibit
9	Calenberger Neustadt	Plaza	Beer Garden	Metro Station	Pizza Place	Rock Club	Hotel	Tram Station	Bike Shop	Fruit & Vegetable Store	Pub

- Lee could use this list to explore the boroughs further before he makes a final decision

K-Means Clustering



Recommendation

- After combining all results, we identified one single borough, that is most likely the best choice for Lees new area to live: **Mitte**.

Discussion

- If the analysis was performed by street, more detailed recommendations would be possible
- Elaborate recommendations will be possible if a new measure is created by additionally considering the weight of the distance to the favorite venue including the location of available apartment