

Where to Go, Stay, and Play in Munich, Germany

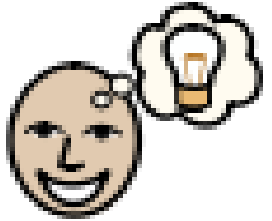
Final Assignment of the “Applied Data Science Capstone”

IBM Data Science Certification

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Introduction



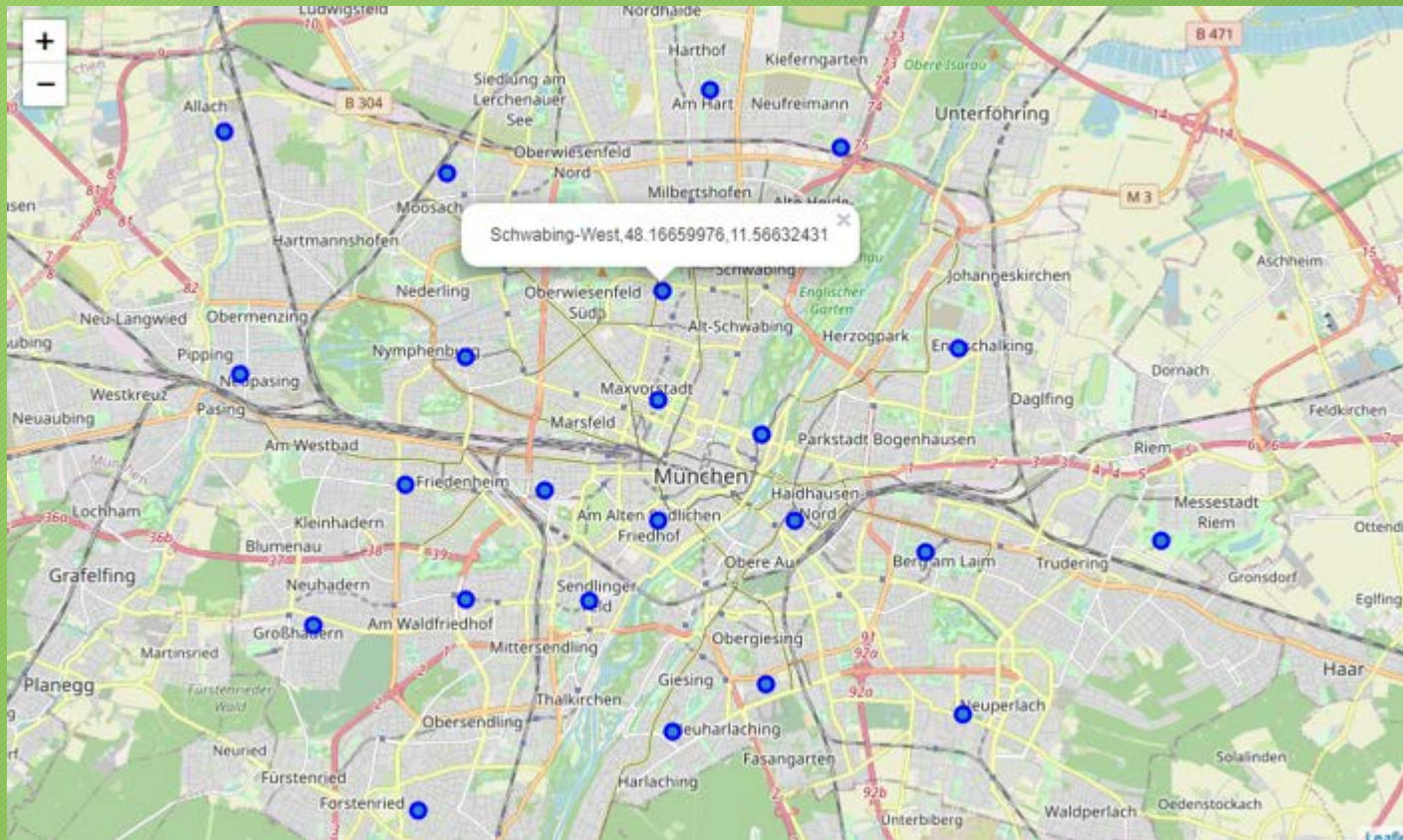
- As a German living in the United States, I often get asked about where to go and what to see when Americans are visiting Germany. Being from Bavaria, I tend to make recommendations about visiting Munich, being world known about the annual Oktoberfest, the English Garden (comparable to Central Park in New York City), Nymphenburg Palace (home of the Bavarian kings), beer gardens, Lederhosens, beer steins, the annual “Christkindlmarkt” (Christmas market) and more.

Description of data used in the analysis



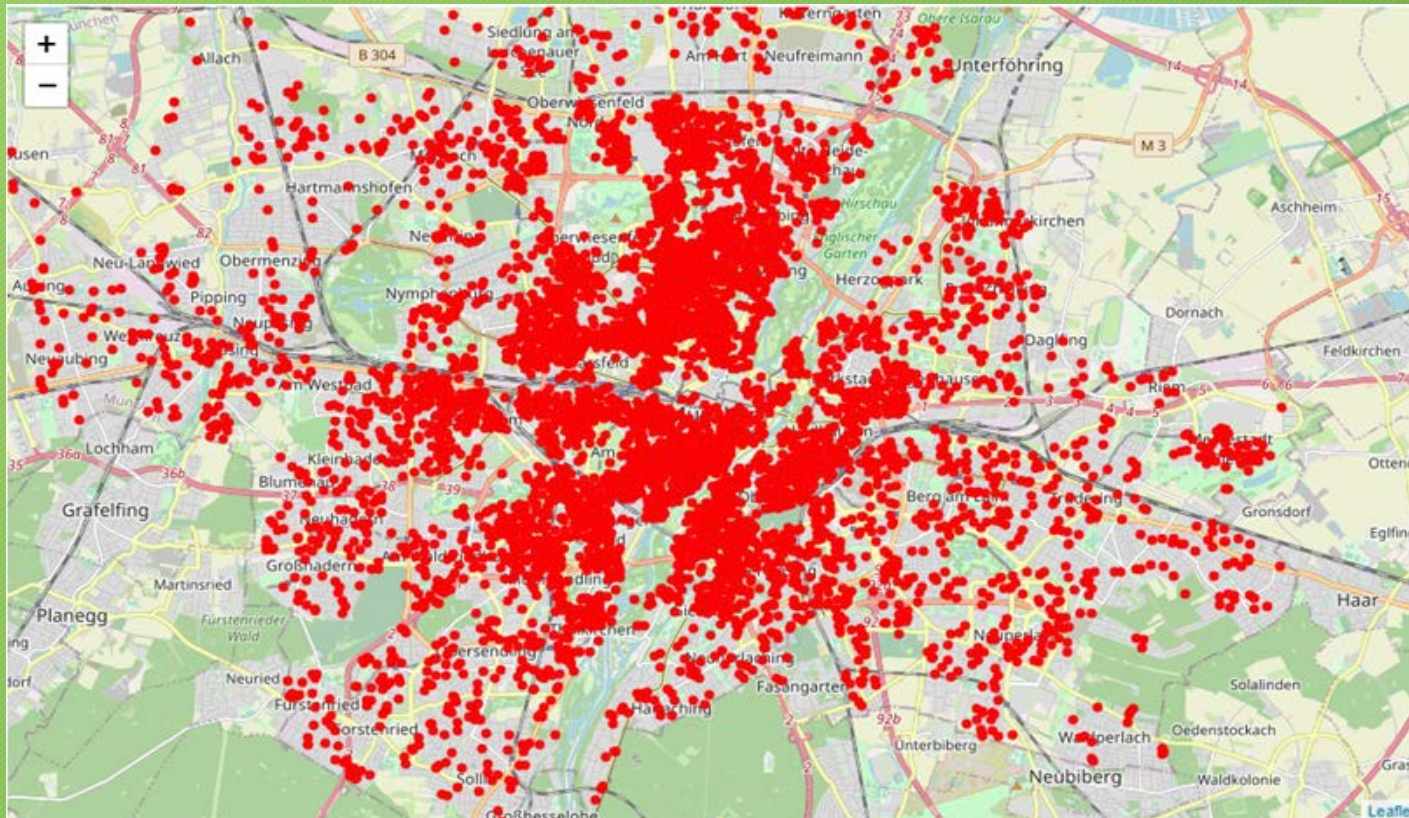
- For the analysis the following data sets have been used
 - <https://data.insideairbnb.com/germany/bv/munich/2020-04-25/visualizations/listings.csv>
 - <https://data.insideairbnb.com/germany/bv/munich/2020-04-25/visualizations/neighbourhoods.geojson>
 - While FourSquare data will be integrated and used via the developer account, general information about Munich can be found in the FourSquare City Guide @
<https://foursquare.com/explore?mode=url&near=Munich%2C%20Germany&nearGeoid=72057594040795650&q=Food>
 - Geocoder package for latitude and longitude coordinates

Districts of Munich, Germany



- The City of Munich itself is subdivided into 25 districts, each governed by a district mayor and district representatives.

Total available AirBNB accomodations



- While German law basically does not allow ride hailing options like Uber or Lyft, AirBNB has more than 11,100 locations available within the Munich city limits.

Methodology

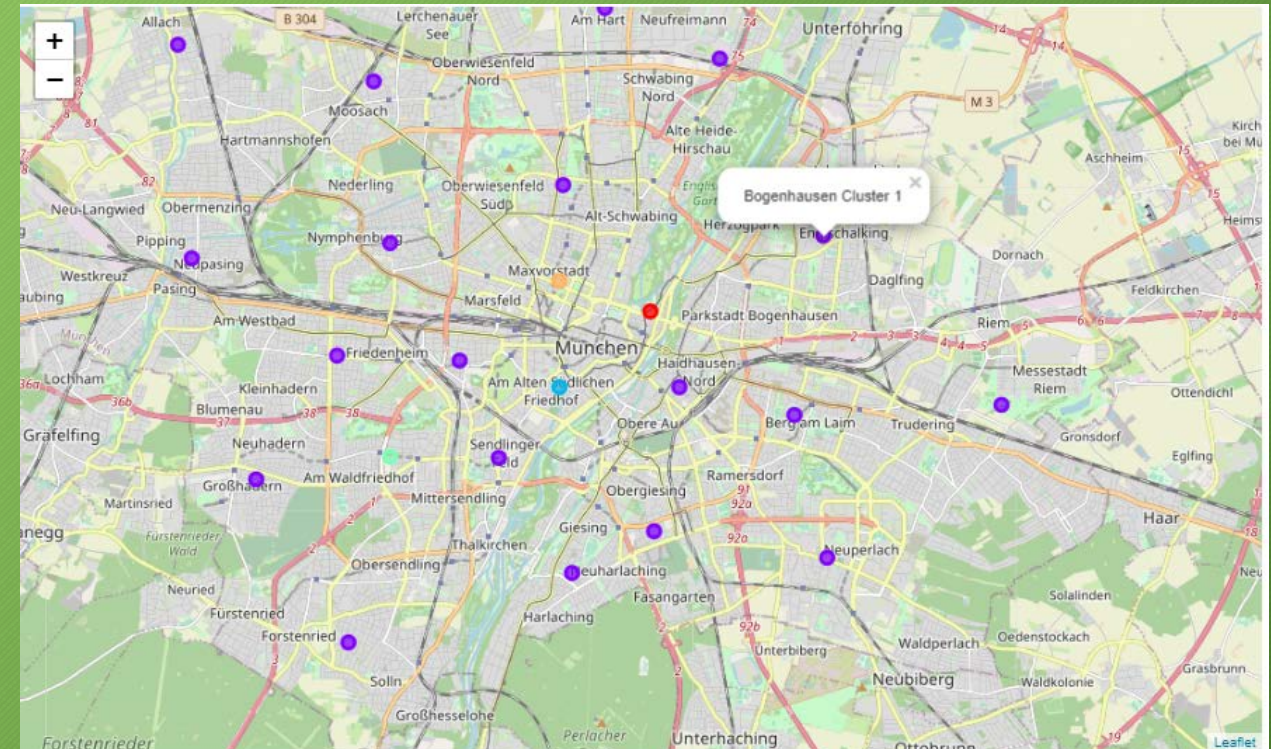


- Integration of Neighborhood and AirBNB data
- Latitude & Longitude coordinates via Geocoder
- FourSquare for retrieving venue data
- Grouping of data and mean of frequency of occurrence of each venue category by district
- Perform of clustering on the data by using k-means clustering
- Visualization of the clusters

Results



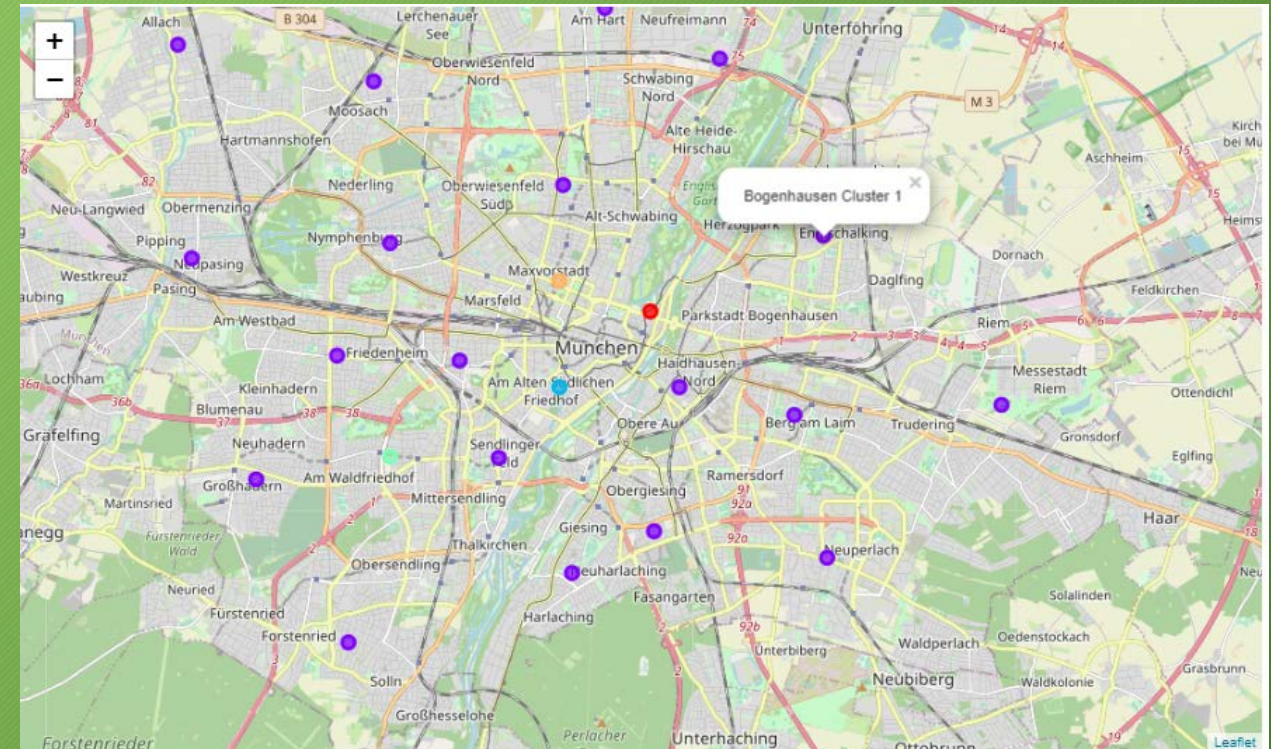
- Maxvorstadt is a unique district as it does not fall within the k-means clustering of all the available characteristics.
- It is the only districts that has “Art Museum” and “History Museum” within the Top 5 of venues.



Discussion



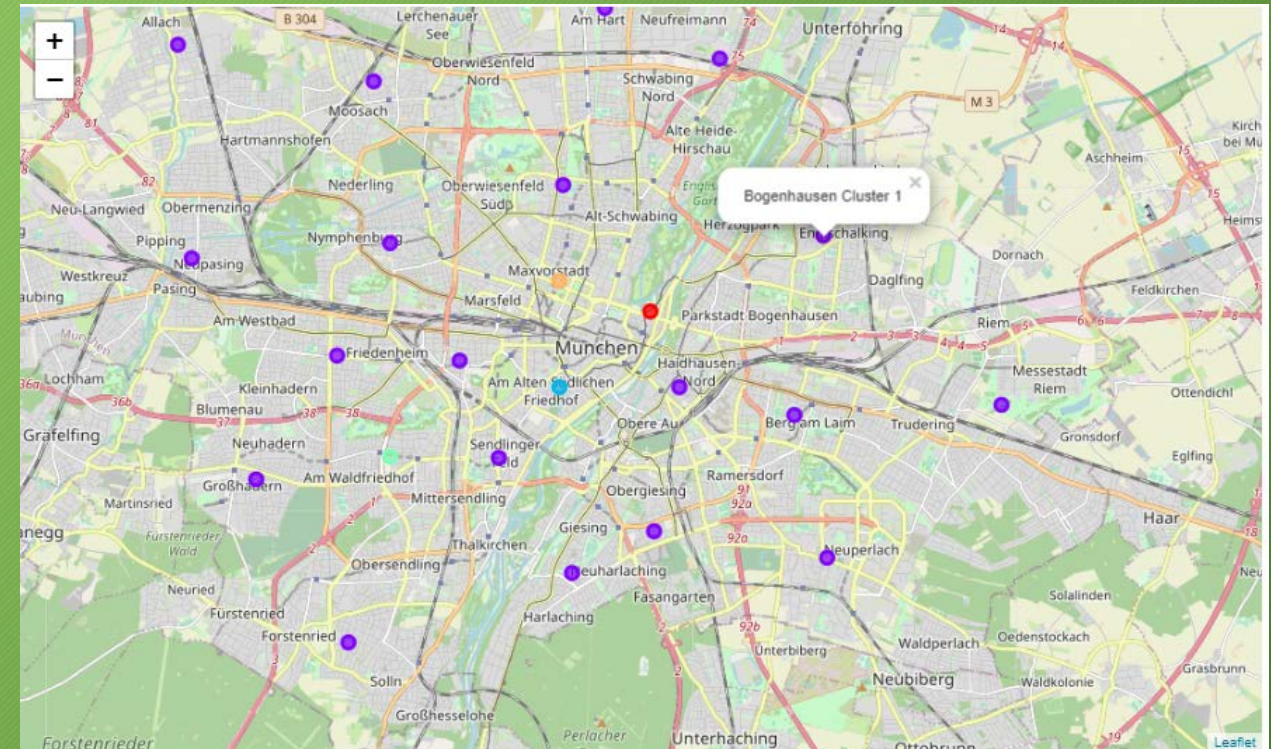
- The inner city districts of Maxvorstadt, Altstadt-Lehek, and Ludwigvorstadt offer a more unique view of Munich.
- Districts that are outside these three districts are more “uniform” in their overall offerings of general entertainment (restaurants, bars, parks, etc)



Recommendations



- Based on the findings of this research project, the recommendation is - for first time visitors - to explore more the inner city districts of Munich.
- For tourists that are returning it is recommended to explore the outer city districts as they are offering a wide variety of touristic options.



Conclusion

- As confirmed by Travel + Leisure in "[Top Travel Destinations for Summer 2018](#)", Munich remains the top travel destination for American tourists in Germany. Therefore, if you have the time & opportunity, simply jump on an airplane and visit this vibrant capital city of Bavaria, Germany.

