FINDING SUITABLE NEIGHBOURHOODS FOR OPENING UP A RESTAURANT IN HAMBURG, GERMANY
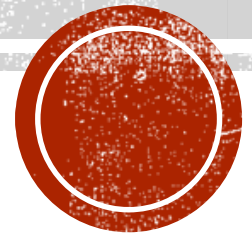
EXECUTIVE SUMMARY

- **Objective:** to find a neighbourhood in Hamburg that is similar to Eimsbüttel in terms of demographics and food preferences.
- **Methodology:**
  - Hamburg neighbourhoods were clustered based on demographic data to identify neighbourhoods with a population structure similar to Eimsbüttel.
  - Food preferences of different neighbourhoods were identified and clusters using data on popular restaurants from Foursquare.
- **Findings:**
  - Hoheluft of Winterhude have both similar demographics and a similar restaurant structure as Eimsbüttel. This could indicate that a restaurant currently operating in Eimsbüttel might successfully expand to these neighbourhoods.
  - There could also be an opportunity in expanding to neighbourhoods that are demographically similar to Eimsüttel, but do not have so many Italian Restaurants, for example Altona-Nord or Eppendorf. In these neighbourhoods competition is likely to be lower.

PROBLEM STATMENT

- The pizza company "Fast Pizza" is successfully operating a restaurant in the neighbourhood of Eimsbüttel in Hamburg, Germany.

- "Fast pizza" would like to expand and open up a new branch in a different neighbourhood.

- The objective of the project is to find a neighbourhood in Hamburg that is similar to Eimsbüttel in terms of demographics and food preferences.
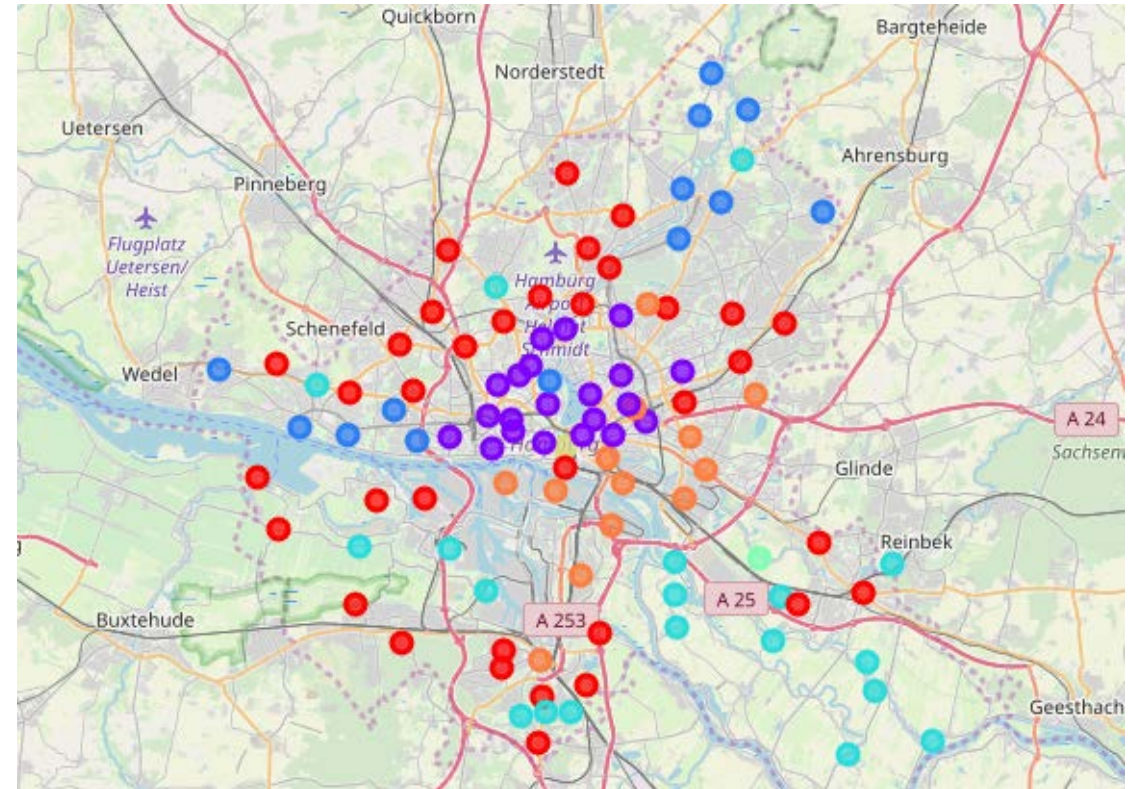
DATA ACQUISITION AND CLEANING

- **Demographic dataset provided by the city of Hamburg**
  - Originally 66 features for each of the 99 neighbourhoods.
  - Duplicate and highly correlated features were dropped.
  - Remaining features after cleaning: minors %, elderly %, migration background %, people per household, single households %, single parent households %, population density, influx of population %, regular employment %, unemployment %, social security receivers %, yearly taxable income per taxpayer, one and two family homes %, home size per inhabitant, social housing %, students in grammar school %, doctors per inhabitant

- **List of popular restaurants in Hamburg based on location data provided via Foursquare API**

DEMOGRAPHIC CLUSTERING

Clusters identified based on neighbourhood demographics

- **Neighbourhoods farther away from the centre, mainly families** e.g. Eidelstedt, Ohlsdorf and Bergedorf

- **Trendy neighbourhoods in central Hamburg** e.g. Eimsbüttel, Sternschanze and Ottensen

- **High income neighboorhoods not too close to the center** e.g. Nienstedten, Blankenese

- **Middle class neighboorhoods farther away from the center** e.g. Niendorf, Allermöhe

- **Poorer neighbourhoods** e.g. Wilhelmsburg, Veddel

FOOD PREFERENCES

- Food preferences in neighbourhoods demographically similar to Eimsbüttel

neighbourhood	1st most common venue	2nd most common venue	3rd most common venue	4th most common venue	5th most common venue
Neustadt	French Restaurant	Italian Restaurant	Scandinavian Restaurant	Turkish Restaurant	Swabian Restaurant
St. Georg	Indian Restaurant	Italian Restaurant	Halal Restaurant	Asian Restaurant	Falafel Restaurant
Hamm	Greek Restaurant	Vietnamese Restaurant	Falafel Restaurant	Italian Restaurant	Indian Restaurant
Sternschanze	Vietnamese Restaurant	Vegetarian / Vegan Restaurant	Asian Restaurant	Korean Restaurant	Kumpir Restaurant
Altona-Nord	German Restaurant	French Restaurant	Vietnamese Restaurant	Falafel Restaurant	Italian Restaurant
Eimsbüttel	Italian Restaurant	Korean Restaurant	Asian Restaurant	Spanish Restaurant	Middle Eastern Restaurant
Rotherbaum	Falafel Restaurant	Italian Restaurant	German Restaurant	Vietnamese Restaurant	Indian Restaurant
Hoheluft-West	Italian Restaurant	Greek Restaurant	Chinese Restaurant	Spanish Restaurant	Japanese Restaurant
Hoheluft-Ost	Italian Restaurant	Chinese Restaurant	Mexican Restaurant	Paella Restaurant	Vietnamese Restaurant
Eppendorf	Argentinian Restaurant	German Restaurant	Vietnamese Restaurant	Falafel Restaurant	Italian Restaurant
Winterhude	Italian Restaurant	Thai Restaurant	Sushi Restaurant	Falafel Restaurant	Doner Restaurant
Uhlenhorst	Italian Restaurant	Asian Restaurant	Vietnamese Restaurant	Falafel Restaurant	Indian Restaurant
Barmbek-Süd	Doner Restaurant	Falafel Restaurant	German Restaurant	Italian Restaurant	Indian Restaurant
Barmbek-Nord	German Restaurant	Vietnamese Restaurant	Falafel Restaurant	Italian Restaurant	Indian Restaurant
Eilbek	Dim Sum Restaurant	Vietnamese Restaurant	Falafel Restaurant	Italian Restaurant	Indian Restaurant
Wandsbek	Greek Restaurant	Vietnamese Restaurant	Falafel Restaurant	Italian Restaurant	Indian Restaurant

RECOMMENDATION

- Hoheluft of Winterhude have both similar demographics and a similar restaurant structure as Eimsbüttel. This could indicate that a restaurant currently operating in Eimsbüttel might successfully expand to these neighbourhoods.

- There could also be an opportunity in expanding to neighbourhoods that are demographically similar to Eimsbüttel, but do not have so many Italian Restaurants, for example Altona-Nord or Eppendorf. In these neighbourhoods competition is likely to be lower.