Optimal Location for Italian Restaurant in Berlin

Coursera Data Science Capstone Project

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Business Problem

- There are more than 2000 restaurants in Berlin's city center (12km radius).

- Stakeholders wish to know where the optimal location of a new Italian restaurant could be.

- We are asked to find this out using Data Science techniques.

Data and Methodology

○ Using location data from the Google maps API, geocoding and reverse geocoding a map with clusters will be created and the K-Nearest Algorithm applied

○ Restaurant Data will be extracted from the Foursquare API to find locations with max. 2 restaurants within 250m radius and no Italian restaurant within 400m radius.
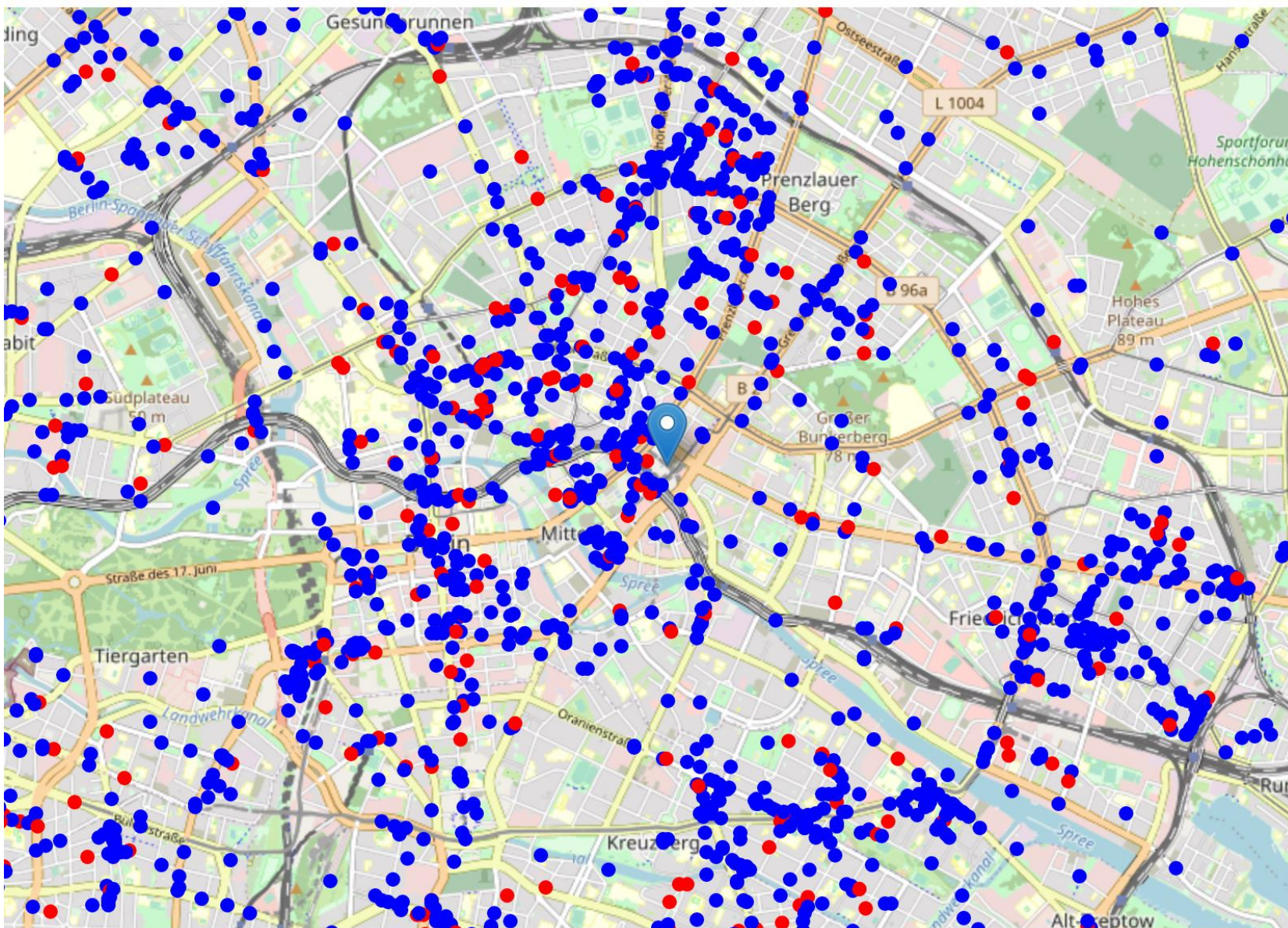
- Red dots
  - Italian restaurants

- Blue dots
  - Other restaurants

Methodology

- Then Italian restaurants are being defined using Foursquare categories. Then our analysis will be calculation and exploration of restaurant density in different areas of Berlin using heatmaps to identify promising areas close to the center with low number of restaurants in general and no Italian restaurants in vicinity. In the last step the most promising areas that meet basic requirements will be presented to the stakeholders:

- Locations with max. 2 restaurants within 250m radius

- Locations with no Italian restaurants within 400m radius

- Presentation of map of such areas using k-means clustering

SPOTS WITH LOW RESTAURANT DENSITY CLOSEST TO CITY CENTER CAN BE FOUND SOUTH, SOUTH-EAST AND EAST FROM ALEXANDERPLATZ
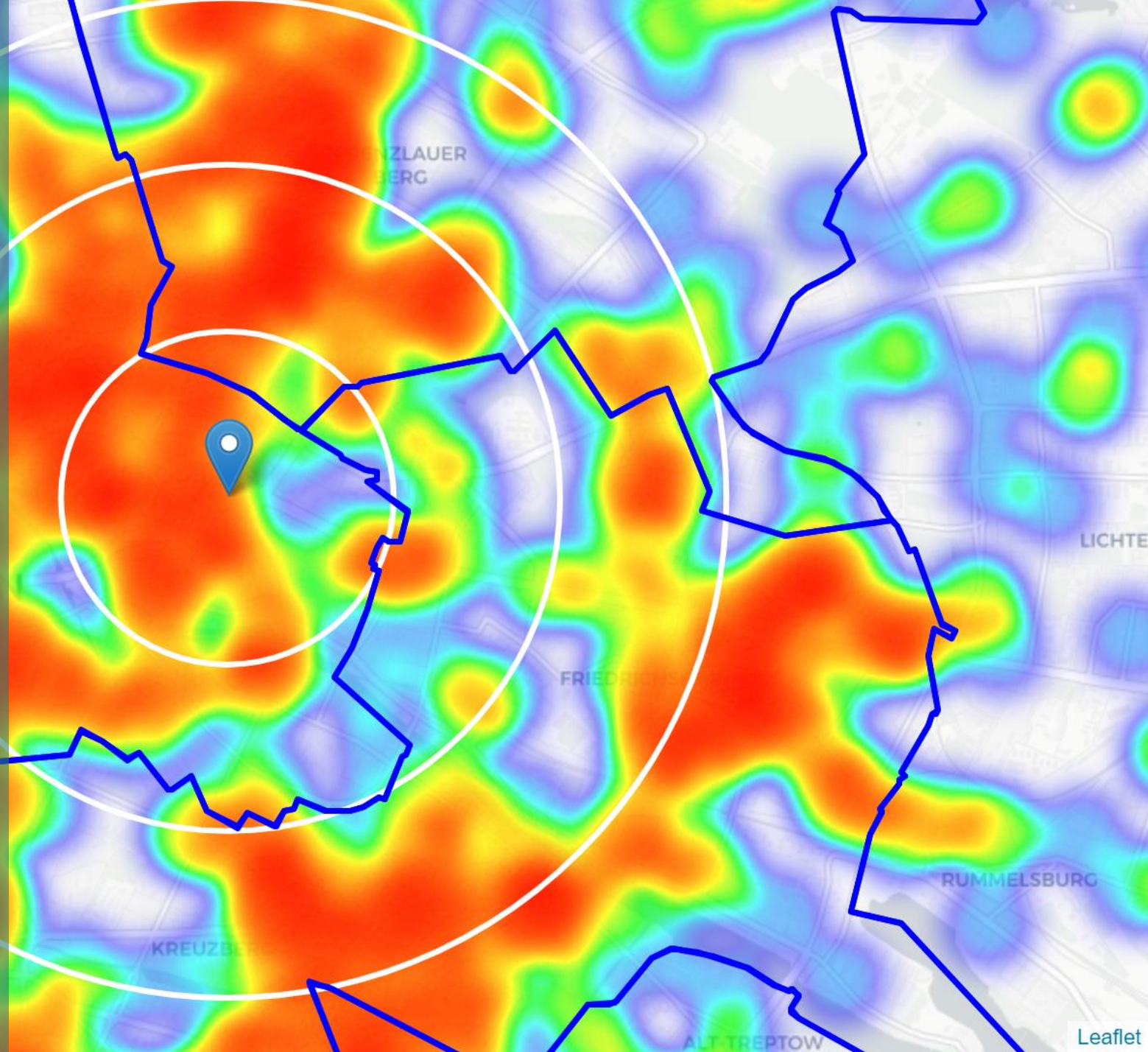
Italian restaurants represent a subset of ~15% of all restaurants in Berlin. **low Italian restaurant density positioned east, south-east and south from city center.**
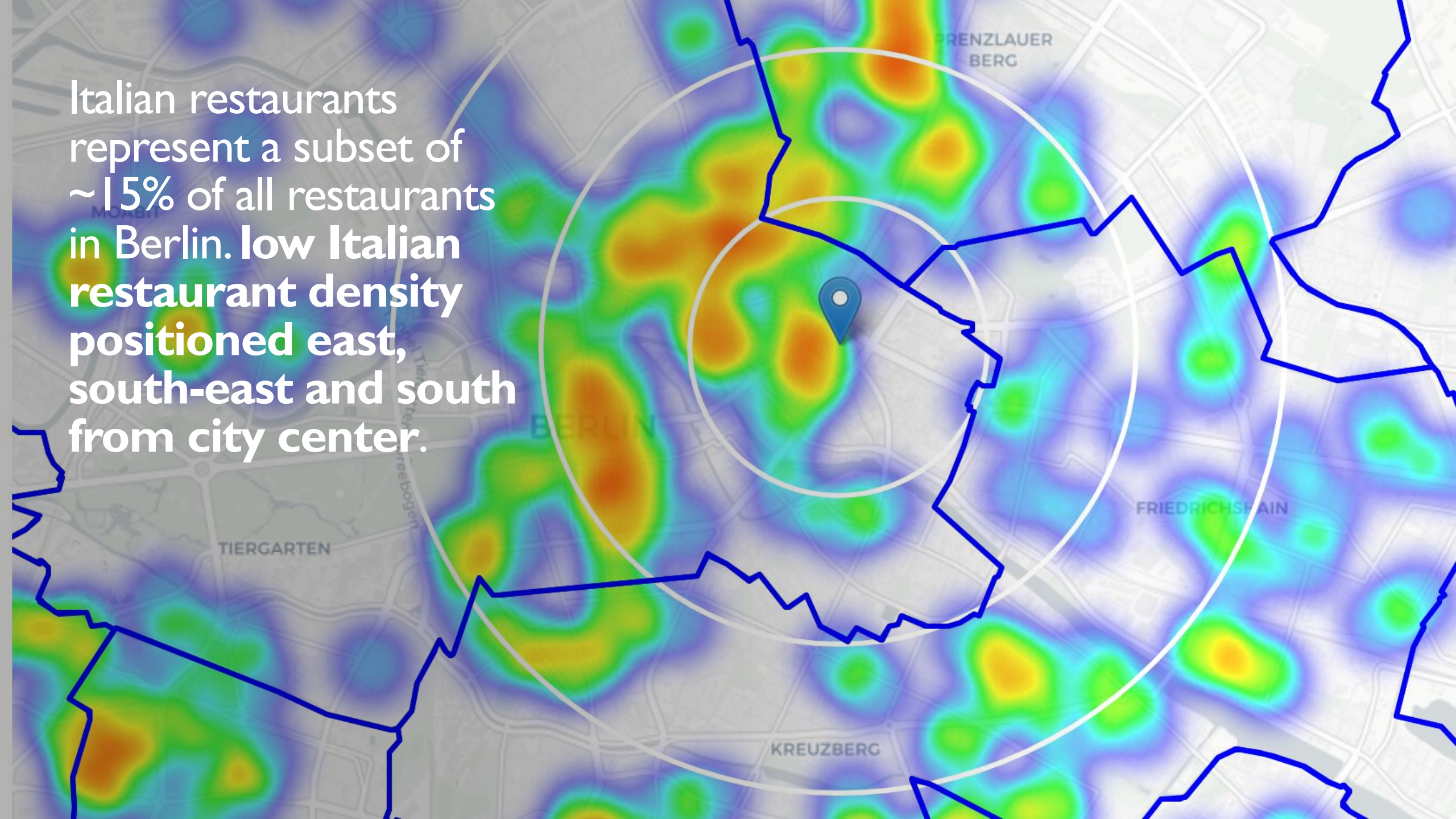
LOCATIONS THAT ARE POTENTIAL CANDIDATES FOR A NEW ITALIAN RESTAURANT BASED ON NEARBY COMPETITION ON HEATMAP
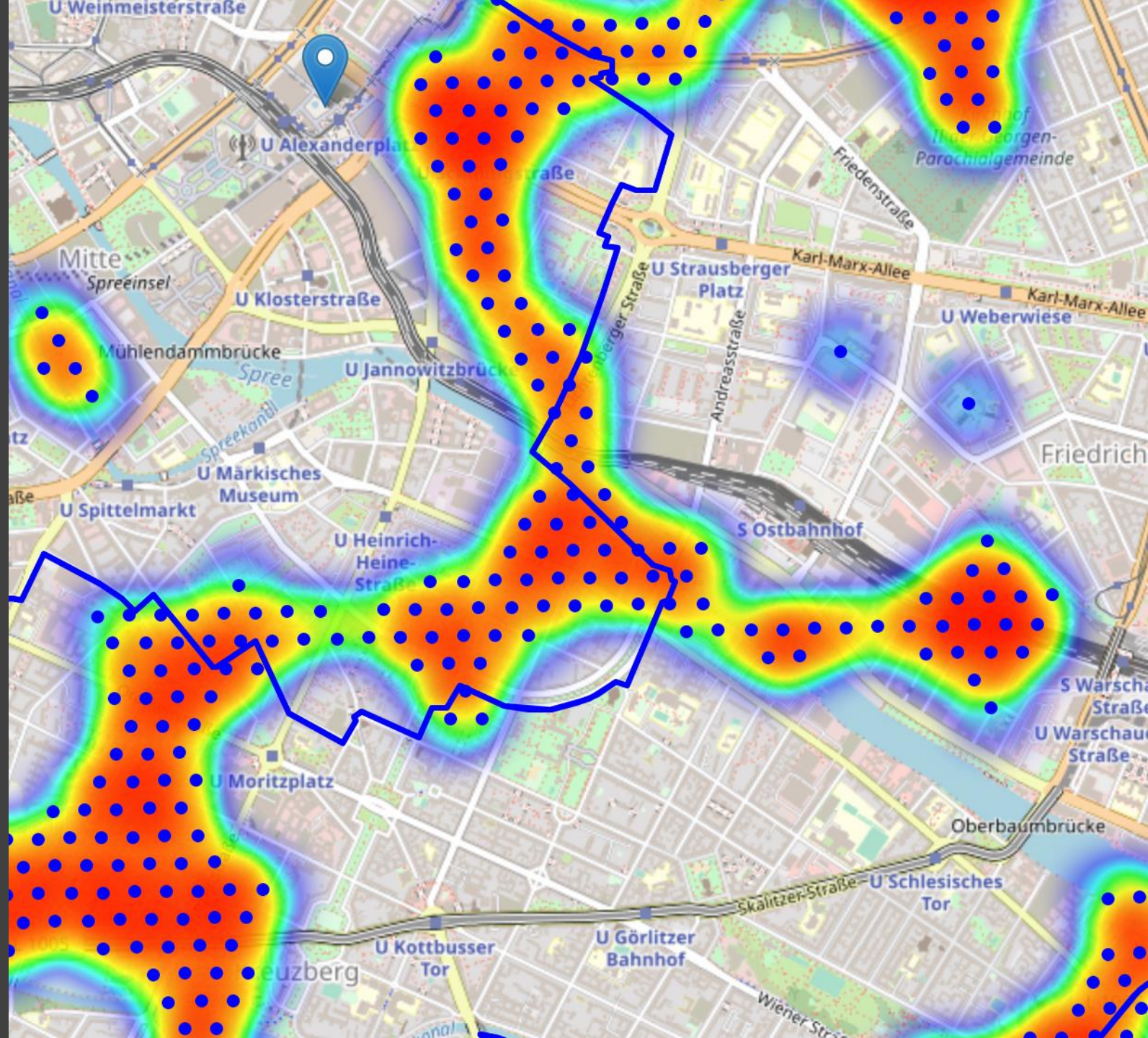
CENTRE OF
SUGGESTED
OPTIMUM
LOCATIONS
FORNEW ITALIAN
RESTAURANT