INSIGHTS ON OPENING AN ITALIAN RESTAURANT IN BERLIN

IBM – CAPSTONE PROJECT

BUSINESS PROBLEM

- This report will be targeted to **stakeholders interested in opening an Italian restaurant in Berlin**, Germany

- **Target**:
  - Areas with no Italian restaurants in vicinity
  - Locations as close to city center as possible

- **Advantages of each area** will then be clearly expressed so that best possible final location can be chosen by stakeholders

DATA

- **Factors** that will influence our decision are:
  - number of existing restaurants in the neighbourhood
  - number of and distance to Italian restaurants
  - distance of neighbourhood from city center

- The following **data sources** will be needed to extract/generate the required information:
  - centers of candidate areas will be generated algorithmically and approximate addresses of centers of those areas will be obtained using **Google Maps API reverse geocoding**
  - number of restaurants and their type and location in every neighborhood will be obtained using **Foursquare API**
  - coordinate of Berlin center will be obtained using **Google Maps API geocoding** of well known Berlin location (Alexanderplatz)

METHODOLOGY

Analysis to area ~6km around city center in three consecutive steps:

- Collection of **data: location and type (category) of every restaurant within 6km from Berlin center** (Alexanderplatz). We have also **identified Italian restaurants** (according to Foursquare categorization).

- Calculation and exploration of '**restaurant density**' across different areas of Berlin - we will use **heatmaps** to identify a few promising areas close to center with low number of restaurants in general.

- Focus on most promising areas and within those create **clusters of locations that meet some basic requirements** established in discussion with stakeholders: we will take into consideration locations with **no more than two restaurants in radius of 250 meters**, and we want locations **without Italian restaurants in radius of 400 meters**

ANALYSIS

- Calculate the **distance to nearest Italian restaurant from every area candidate center:**
  - **On average Italian restaurant can be found within ~500m** from every area center candidate.
  - There are few pockets of low restaurant density closest to city center can be found **south, south-east and east from Alexanderplatz**.
  - **Low Italian restaurant density positioned east, south-east and south from city center**.

- Based on the above we will now focus our analysis on areas *south-west, south, south-east and east from Berlin center*.
- This places our location candidates mostly in boroughs **Kreuzberg and Friedrichshain** (another potentially interesting borough is **Prenzlauer Berg** with large low restaurant density north-east from city center,

RESULTS AND DISCUSSIONS

- Focused must be on areas south, south-east and east, corresponding to boroughs Kreuzberg, Friedrichshain and south-east corner of central Mitte borough.

- Another borough was identified as potentially interesting (Prenzlauer Berg, north-east from Alexanderplatz), but our attention was focused on Kreuzberg and Friedrichshain which offer a combination of popularity among tourists, closeness to city center, strong socio-economic dynamics *and* a number of pockets of low restaurant density.

- Result of all this is 15 zones containing largest number of potential new restaurant locations based on number of and distance to existing venues - both restaurants in general and Italian restaurants particularly. This, of course, does not imply that those zones are actually optimal locations for a new restaurant!

- Recommended zones should therefore be considered only as a starting point for more detailed analysis which could eventually result in location which has not only no nearby competition but also other factors taken into account and all other relevant conditions met.

CONCLUSIONS

- Purpose of this project was to identify Berlin areas close to center with low number of restaurants (particularly Italian restaurants) in order to aid stakeholders in narrowing down the search for optimal location for a new Italian restaurant.
- By calculating restaurant density distribution from Foursquare data we have first identified general boroughs that justify further analysis (Kreuzberg and Friedrichshain), and then generated extensive collection of locations which satisfy some basic requirements regarding existing nearby restaurants.
- Clustering of those locations was then performed in order to create major zones of interest.
- Final decision on optimal restaurant location will be made by stakeholders based on specific characteristics of neighbourhoods and locations in every recommended zone, taking into consideration additional factors like attractiveness of each location (proximity to park or water), levels of noise / proximity to major roads, real estate availability, prices, social and economic dynamics of every neighbourhood etc.