Predicting tourist accommodation location in Ljubljana, Slovenia

Capstone final project – week 4

Marko Kastelic
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Business problem

The city of Ljubljana, capital of Slovenia, has been a very popular tourist destination in the recent years and it hosts more tourists each year. Also more and more tourists decide to stay in Ljubljana for more than 1 day. Thus the accommodation offering (hotels, motels, inns, bed & breakfasts etc.) needs to grow with the demand.

One of the most important factors when looking for a location for tourist accommodation is location. The goal of this project is to identify parts of the city of Ljubljana that could be candidates for location for tourist acommodation.

The report is targeting investors/stakeholders/contractors that are interested in creating new accommodation offerings in Ljubljana. The results should be interesting for either small sized (butique) acommodations as well as higher capacity accommodation.

Data

The following assumptions will be considered when trying to find a potential location of tourist accommodation:
- No other tourist accommodation venue in vicinity.
- Gravitating towards the city center. Most of Ljubljana's attractions are in the city center.
- Walking distance away to existing food & drink venues. We will not distinct specifically on the type of food venue.
- Walking distance to the public transportation grid (bus stations/stops).

The main datasource will be Foursquare database for the following information:
- Location of existing accommodation venues (any type).
- Location of existing food venues (any type).
- Bus station/stop locations.

Transformations between addresses and geographic locations will be done using the Nomatim API.

Locations of administrative regions (neighbourhoods/boroughs/districts) could be used as source points for Foursquare requests. However those regions have incorrect shapes and very different sizes which can skew the data. To avoid search gaps it was decided to place a square grid over the city of Ljubljana, spanning several kilometers and centered at the most popular tourist spot, "Ljubljansko tromostovje".

Each grid unit/area will be used as a bounding box for retrieving venues from Foursquare using the search API.