Data

As mentioned in the introduction, several data sets are necessary to fully explore the given problem. For the case of travelling to Istanbul, the following datasets were used:

- List of districts of Istanbul with simple statistics such as population, area and population density obtained from https://en.wikipedia.org/wiki/List_of_districts_of_Istanbul

- Geospatial data of the borders of Istanbul districts for visualization, obtained from https://gadm.org/

- Average rent prices for districts of Istanbul obtained from https://www.realtygroup.com.tr/average-rent-price-in-istanbul-is-1486-tl/. Due to the lack of free API or data sets for prices of short time accommodation, such as hotels, hostels or Airbnb, an assumption was made that apartment rental prices in each district is positively correlated with short term accommodation prices.

- Number of crimes reported per district obtained from "*Ergun, N., & Yirmibeşoğlu, F. (2007). Distribution of Crime Rates in Different Districts in Istanbul. Turkish Studies, 8(3), 435–455. doi:10.1080/14683840701489324*". Crime data was used to calculate a crime index for each neighbourhood, based on crime numbers, population and weighted by seriousness of the crime. Described more in methodology section.

- Top attractions in Istanbul together with their score and location coordinates were obtained from Triposo API. This data was used to calculate district-attraction score, based on the distance from district to attraction and weighted by the inverse of its score. Described more in methodology section.

- Top eateries in Istanbul together with their score and location coordinates were obtained from Triposo API. This data was used to calculate district-food score, based on the distance from district to eatery and weighted by the inverse of its score. Described more in methodology section.

*NOTE: For attractions and eateries, Triposo API was used instead of Foursquare API. Foursquare API does not have option to explore sightseeing places ('tourist sight', 'Popular with visitors' or similar searches return tourist information, hotels, restaurants, etc. all mixed) and getting ratings of restaurants required separate request for each place which is a premium call (limited use for free accounts). According to a response from staff in the discussion forum for week 4, the usage of other API instead of Foursquare is allowed.