The battle of neighborhoods Project

A Travel Advisor

1. Background and business problem definition:

Traveling has become a routine part of our daily lives, be it visits to different neighborhoods, traveling for a vacation or permanently moving to a new location. We choose our destination typically based on our previous experience, recommendation or based on how well the place relates to our personal preferences. Nowadays, the availability of the data that contain information about neighborhoods makes it possible to design a travel advisor that could assist in choosing the right place. In this paper, we define a simple travel assistant that provides a user with a list of most suitable neighborhoods given user's preferences. A practical solution might be deployment of this model into an application, where a user would choose one or multiple categories representing their preferences and based on their choice a list of most suitable neighborhoods will be provided.

2. Data description:

For the purposes of a simple proof of concept, we have decided to continue with the dataset of Toronto's neighborhoods. The postal codes of Toronto are available on the Wikipedia page. The geospatial information of latitude and longitude for these neighborhoods is provided within the project repository. Based on this data, we use Foursquare API to obtain venues located in the neighborhood. For this analysis, we are only interested in a category of the venue, however further expansions might also consider customer reviews. Thus, we associate each postal code with the array of venues' categories (Figure 1: Data example).

```
Postal Code
M1B                 [fast food restaurant, home service]
M1C    [golf course, construction & landscaping, home...
M1E    [bank, electronics store, spa, restaurant, mex...
M1G    [coffee shop, coffee shop, korean bbq restaura...
M1H    [caribbean restaurant, hakka restaurant, thai ...
Name: Venue Category, dtype: object
```

Figure 1: Data example