Capstone Project Proposal

Relocation Support

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Introduction

This notebook contains the project proposal as the Week 4 peer-graded assignment for the Course IBM Applied Data Science Capstone on Coursera, which requires define a problem for the captsone project. The project should make use of the API Foursquare.

Problem description

In our globalised world it is quite common people moving around to take good opportunities, what could be a better position in their companies, a new job offer, a chance to learn from different cultures or even improvements in their quality of life.

People who has already been in the situation of relocating to an unknown place, perhaps abroad, may have experienced the confusion and doubts to choose a place to live like, it it better near to work place or school? Near city downtown or periphery? Decisions like this normally are also not comming alone, there are lots of stressing tasks to perform, all together.

My proposal for this project is to provide support to relocators, or relocation service providers, with the task of choosing a place to live. Using the relocator profile and a target geographic location, a rank of different places will be provided to the relocator, giving some directions to support during the evaluation process of choosing a place to live.

Data description

The data in this project will include:

- **Relocator profile**:
  Information required to rank the neighborhoods according to the relocator preferences, for this project it should be arbitrary defined, basically profile should be composed of the following:
  Priorities List, it is going to be used to give a score to venues according to their categories, e.g. when the relocator has kids at school age, the school category will be on priority list, when the relocator likes jogging, the park category will be on priority list. Neighborhoods with more prioritized venues will have higher score.
  Rental Budget it is going to be used to indicate the neighborhoods the relocator can afford the monthly rental.

- **Target location**:
  Relocator should define a target location to rank the places, for this project a city should be arbitrary defined, e.g. São Paulo, Brazil.

- **Neighborhoods**:
  Based on the target location a collection of neighborhoods should be created, the internet can be used to search for the neighborhoods using scrape techniques. For the example of São Paulo, the official city municipality web site contains the city division in its regions and neighborhoods.

- **Neighborhood rental prices**:
  A orientative price for the neighborhoods helps the relocator to decide, the internet can also be used to search for the rental prices across the target place using scrape techniques.

- **Venues**:
  For each neighborhood a collections of venues and their categories should be created, they will be used to rank the neighborhoods using the relocator profile. The **API Foursquare** is the toll to be used to collect the venues and their information.

- **Neighborhoods Rank**:
  The rank is going to be created using the venues information in comparison with the relocator profile.