Coursera Capstone Project

"Zurich best Neighbourhood"

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1.Introduction

1.1 Problem

A contractor has been assigned to work on a project in Zurich. He doesn't have much time to research which is the best neighbourhood to move to so he decides to automate this task.
In order to choose which neighbourhood, he wants to move to he has a series of requirements the neighbourhood must meet. The neighbourhood must have a:

- Bus or Tram station
- Gym to keep fit
- Restaurant, bonus points if it is a Steakhouse as he's a very keen meat eater
- Park to have his morning walk
- Movie Theatre to spend the evenings.

2.Data acquisition and cleaning

2.1 Data sources

Zurich is divided in 12 *Kreis* (Districts) which are further subdivided into 20 Neighbourhoods.
The data regarding Zurich's neighbourhoods was taken from Wikipedia at this link.
In order to have the longitude and latitude for each neighbourhood an API call to the OpenStreetMap database was used.
The data to identify if the neighbourhoods meet the contractor's criteria will be taken from Foursquare. Specifically, an API call containing the coordinate of the various neighbourhood was used to identify the venues which are within a radius of 600 meters from the neighbourhood.

2.2 Data cleaning

The data scraped from Wikipedia was enriched with the latitude and longitude data coming from the OpenStreetMap database. The resulting table was checked to verify that the geocoordinate were correct. All the neighbourhood coordinates were correct except for the neighbourhood of Altstadt. This was rectified by manually inputting the right coordinate found at this link.