Neighbourhood comparison for Uppsala or any other city with Foursquare

Introduction

In modern times, the regional planning has an increasing importance: globalization, migration flows, connectivity are examples of factors that changes the society continuously and this reflects in how our cities are built.

Foursquare, with its API, is a gold mine of information that can be used as basis to other studies.

This work aims to give a simple tool that suits the data provided by Foursquare to create a unique fingerprint of a certain area, such as a neighbourhood. This fingerprint can be used to compare the area with other ones, which can be anything.

A quick comparison among different zones gives information that can be suited as ground for regional planning, demographics and more.

Uppsala has been taken as an example since it has quite different neighbourhood types; however, the Python notebook can be easily modified to make other kinds of comparisons Examples: two commercial areas in two different cities; a Chinatown against a true Chinese city; low-value residential zones in different cities of the same nation. Professionals such as e. g. researchers and urbanists can suit this work as a tool for their inquiries.

Data

The main data is retrieved from Foursquare by means of its API: basically, the only thing that is needed is the number of venues of a certain type, in a given area. Below are examples of the kind of data that is retrieved, applied to the Uppsala's case:

	Type	Ultuna
0	Pharmacy	1
1	Diner	1
2	Food & Drink Shop	1
3	Bus Station	1
4	Gym / Fitness Center	1

	Type	Sala backe
0	Bakery	2
1	Middle Eastern Restaurant	1
2	Grocery Store	1
3	Park	1
4	Pizza Place	1
5	Bus Stop	1
6	Fast Food Restaurant	1

For the Uppsala case, the swedish Wikipedia article about Uppsala's neighbourhoods is web-scraped: https://sv.wikipedia.org/wiki/Lista_%C3%B6ver_stadsdelar_i_Uppsala

Finally, the coordinates of each zone is retrieved by means of the geopy.geocoders library.