CAPSTONE PROJECT: BATTLE OF THE NEIGHBORHOODS

Frankfurt visitors venue recommendation

Problem description

I work for a global company. One of our targets in 2019 is to reduce travel spend. Many colleagues from different countries come to Frankfurt every day, because the headquarters are placed there. Frankfurt is the leader in our location spend overview.

Now our colleagues stay in hotels located in the city centre, because of the nearness to the headquarter and great opportunities to go out in the evening.

Unfortunately, are the prices per night in Frankfurt city centre very high, but there are very good hotels near the city centre. Furthermore, some departments are located in Frankfurt neighbourhood Eschborn, were the hotels are lower-priced as they do in Frankfurt, but there are only few colleagues, who stay in hotels in Eschborn.

I would like analyse Frankfurt venues and neighbourhoods venues to show, that there are a great opportunities to stay in the hotels outside of Frankfurt city centre.

Data

I will use FourSquare API to explore neighbourhoods in Frankfurt. The Foursquare explore function will be used to get the most common venue categories in each neighbourhood, and then use this feature to group the neighbourhoods into clusters.

For example there is a venue in one of the neighbourhoods. As basic information, we can obtain its precise latitude and longitude and also its distance from Frankfurt city centre.

- The following information are retrieved on the first query:
- Venue ID
- Venue Name
- Coordinates : Latitude and Longitude
- Category Name
- Distance to Centre

But we are looking for advanced information such as the category of that venue, how popular one is this venue in its. Additional information I will use for clustering:

- Venue summary
- Venue Category

PS: Note that rating information is a paid service from Foursquare and I have limited account, so I will be able to make 50 queries per day.