IBM Capstone Week 4 Report

Introduction

This project is about using data science toolset on a real-life problem and demonstrating the creation of value by applying the learned skills. I present here the summary of my project and the findings. The analysis was performed in Python.

Description of the Business Problem

For this project, I chose a hypothetical business problem.

A successful owner of multiple mid to high-end restaurants decided to open a new restaurant in Dubai, UAE.

Having visited the city many times in recent years, he couldn't disregard the big boom in gastronomy. He is keen on opening a new unit, which will focus on the European and Asian fusion kitchen.

Taking into account the price level at which the restaurant will operate, the intent is to find an optimal location in an area, where

gastronomy is booming, and which is easily accessible for tourists and for wealthier local citizens as well.

Assumptions, business logic

The assumption behind the analysis is that we can use unsupervised machine learning to create clusters of Communities that will provide us with a list of areas for consideration for the restaurant. The intent is that the restaurant to be situated close to one of the gastronomical centers and touristic hotspots.

Audience

While here we are assuming a concrete business owner to whom we are addressing this report, but actually this restaurant owner can be treated as a persona and thus this analysis could be useful for a group of market players (restaurant owners).

Use of Data and Methodology

After tidying up and exploring the data, we will apply the K-means machine learning technique for creating clusters of Communities. We will use the silhouette score for choosing the optimal number of clusters.