IBM Data Science Capstone Project
Final Report

Fadel Victor Shanaa

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fvshanaa@gmail.com

Determining the Optimal Location for Building a Fine Dining Restaurant in Moscow, Russia

Introduction:

Fine dining restaurants are a very high class of restaurants which feature prominent décor made of high-quality materials, high prices on the food, and an etiquette that must be followed by staff and visitors alike. Fine dining has been around since the late 18th century and is very popular in Western Europe and parts of North America. The popularity is due to not only the exquisite tastes and décor, but also the geographical positioning of the restaurant. They are typically located in upscale areas of a city. This project will be about a restaurateur trying to open a fine dining restaurant in the city of Moscow. For them to maximize profits, the restaurant must be positioned in the best possible district.

Business Problem:

As mentioned in the introduction, this project will focus on a restaurateur trying to open a high-end fine dining restaurant in Moscow, Russia. Fine dining is not as popular in Russia as it is in the West. The cuisine will be a mix of Italian and French. The goal will be to try and find the best district for the restaurant to open given its price level and type of cuisine.

The restaurant must attract the right clientele which will primarily consist of wealthy businessmen, politicians, and tourists. From a technical perspective, this project will have us use a clustering algorithm that will cluster the different districts of Moscow into different groups. For the purposes of this project, we will cluster the districts of Moscow into 3 groups: Upper Tier, Mid-Tier, Low Tier.

Theoretically, this restaurant should be located either as close to the Kremlin as possible or in the business district of Moscow. Our Target Audience is the clientele since they will be dining there, the investors since we will need start-up capital, and finally other data scientists who will be interested in seeing how the problem of opening a restaurant might be solved using a data driven approach.

Data:

The data we will use will come from Wikipedia. Specifically, it will come from the following link:

https://en.wikipedia.org/wiki/Category:Districts_of_Moscow

The above link contains all the districts of Moscow. We will use BeautifulSoup and pandas to parse and store the content of that page. We will use the geocoder library to obtain the latitude and longitude values of those districts. Finally, we will use the Foursquare API to get the data about the different venues located in those districts.