Coursera Capstone

IBM Applied Data Science Capstone

Opening a New Lebanese Restaurant in New York, USA

By: Nadim Tawk

February, 2020

INTRODUCTION

The Lebanon kitchen is immensely famous for the variety of spices and ingredients. The mouth-watering authentic flavorful recipes are well known throughout the world. In Lebanon, most local restaurants serve typical Lebanese mezze, an array of more than 60 small hot and cold, fresh savory dishes, mostly eaten with bread ('khebbez'). Lebanon, especially Beirut, is crammed with attractive restaurants, lunch places and bars. For each destination, a selection of bars, restaurants and other eateries is provided.

The City of New York, is the most populous city in the United States. It is diverse and is the financial capital of USA. It is multicultural. It provides lot of business opportunities and business friendly environment. It has attracted many different players into the market.

A Lebanese businessman approached me, Data Scientist Consultant, aiming to open a Lebanese Food Restaurant in New York. The location of the restaurant is one of the important decisions that will determine whether the restaurant will be profitable or not.

Business Problem

The objective of this Capstone Project is to analyze and select the best location in New York City to open the Lebanese Restaurant. Using state-of-the-art machine learning techniques like clustering, this project aims to help answer the business question: Which neighborhood is the most favorable one for the Businessman to consider for his new Lebanese Restaurant?

Target Audience

This project is extremely useful to all businessmen and investors aiming to open or invest in a new restaurant in New York City.

Data

We will need the following data in order to solve the current problem:

- List of Neighborhoods in New York.
- Latitude and Longitude coordinates of each Neighborhood. This will allow us to plot the map and to get the venues in each neighborhood.
- Venue data, especially the ones related to Lebanese Restaurants (used for clustering)

Sources of Data and Methods:

- New York City data will be downloaded from the following website: https://geo.nyu.edu/catalog/nyu_2451_34572
- Geographical coordinates of the neighborhoods using Python Geocoder package
- Foursquare API to get the Venue Data