

Introduction

A cuisine is a style of cooking characterized by distinctive ingredients, techniques and dishes, and usually associated with a specific culture or geographic region. Regional food preparation traditions, customs and ingredients often combine to create dishes unique to a particular region. A cuisine is primarily influenced by the ingredients that are available locally or through trade, they can even be made into distinct ingredients themselves when they become popular within a region.

New York City has been described as the cultural capital of the world and the current NY cuisine is an amalgam of numerous culinary traditions. Particular foodstuffs, recipes, methods of preparation, and styles of presentation have been contributed to the mixture by dozens of ethnic groups, but few of the “ways” survived intact. Interactions with a new environment and a different culture produced a synthesis of old and new, a synthesis that changed as one generation replaced another.

Greek immigrants first began migrating to America in the 1890s, but the first large wave of immigrants arrived after the Balkan Wars and World War I. Greeks have continued to migrate back and forth between the US and Greece and they currently make up about 1.0% of the population of New York City. Greek immigrants have developed a home away from home in Astoria, Queens, which is often referred to as “the second largest Greek city after Athens” or “Little Athens,” for being the most popular area for Greeks and Cypriots living in NYC.

Problem

For this final project we want to open a new Greek restaurant in the area of Manhattan. Manhattan is the most densely populated of the five boroughs of New York City, and coextensive with the County of New York, one of the original counties of the U.S. state of New York. Manhattan serves as the city's economic and administrative center, cultural identifier, and historical birthplace. The borough consists mostly of Manhattan Island, bounded by the Hudson, East, and Harlem rivers; as well as several small adjacent islands.

The location of the restaurant will be based on the existing number of Greek restaurants in the area of Manhattan. Most Greek restaurants in the city of New York are associated with the area of Astoria in the borough of Queens, so Manhattan as the center of New York is an excellent area for a Greek restaurant.

Data

The data for this project will be the available data set that was used for week three. This data set exists on the web in the link: https://geo.nyu.edu/catalog/nyu_2451_34572.

The necessary geographical coordinates that are needed for New York and its neighborhoods will be acquired with the FOURSQUARE API, which will also help as to explore New York and the neighborhoods. Furthermore by utilizing the work from week two and three we will use the category id for Greek restaurants and retrieve the necessary data.

Methodology

As it was mentioned, we will use the procedure as it was taught in week two and three for this project.

Steps

a) Download and Explore Dataset

Neighborhood has a total of 5 boroughs and 306 neighborhoods. In order to segments the neighborhoods and explore them, we will essentially need a dataset that contains the 5 boroughs and the neighborhoods that exist in each borough as well as the latitude and longitude coordinates of each neighborhood. After we acquire the data, we transformed it into a pandas dataframe.

b) Geopy library - Create a map of New York with neighborhoods

Using the geopy library we acquire the coordinates of New York and proceed with the creation of the map of New York.

c) New dataframe of Manhattan

A new dataframe from the existing dataframe of New York is created.

d) Foursquare API

Using the Foursquare API and the get request we receive the json file with the Greek restaurants for all the neighborhoods of Manhattan. We transform the file into a pandas dataframe and after that we can start analysing the data.

e) K-mean clustering

The cluster analysis that was performed give back five clusters. Based on this the best areas for a new greek restaurant will be in the clusters 1 and 3.

Discussion – Conclusion

This is just a basic analysis performed for the needs of this course. In order to get a better picture for the situation more factors must be added, and many different ideas can be created based on the results. For example instead of a restaurant a souvlaki food cart in the areas were business people gather for a quick lunch could be better.

In conclusion, I believe the goals were met and this course was an excellent introduction in the data science world.