



Introduction

New York City is the most populous city in the United States. With a population of 8,804,190 distributed over 300.46 square miles (778.2 km²), New York City is also the most densely populated major city in the United States. It has been described as the cultural, financial, and media capital of the world, significantly influencing commerce, entertainment, research, technology, education, politics, tourism, art, fashion, and sports and has sometimes been called the capital of the world.

Situated on one of the world's largest natural harbors, New York City is composed of five boroughs: Brooklyn (Kings County), Queens, Manhattan (New York County), the Bronx, and Staten Island (Richmond County).

The city and its metropolitan area constitute the premier gateway for legal immigration to the United States. As many as 800 languages are spoken in New York, making it the most linguistically diverse city in the world. New York is home to more than 3.2 million residents born outside the United States, the largest foreign-born population of any city in the world as of 2016.

The city's population in 2010 was 44% White (33.3% non-Hispanic White), 25.5% Black or African American (23% non-Hispanic Black), 0.7% Native American or Alaska Native, and 12.7% Asian. Hispanics or Latinos of any race represented 28.6% of the population, while Asians constituted the fastest-growing segment of the city's population between 2000 and 2010.

Asian Americans in New York City, according to the 2010 census, number more than one million, greater than the combined totals of San Francisco and Los Angeles. New York contains the highest total Asian population of any U.S. city proper.

The Chinese population constitutes the fastest-growing nationality in New York State; multiple satellites of the original Manhattan Chinatown, in Brooklyn, and around Flushing, Queens, are thriving as traditionally urban enclaves.

This has allowed, at least in part, the fusion in some aspects of life, of a multi-ethnic culture, involving the cuisine. The demand for ethnic food has increased exponentially over the years, due to its diffusion, low cost and speed in the availability of food.

Problem Description

The objective of this project is to create a perfect place detection tool which will find the best neighbourhood or place to open a Chinese Restaurant using Foursquare API and location data in New York City.

Using Data science methodology and tools such as data analysis and visualization, this project aims to provide solutions in order to answer to the business question: where, in the city of New York, should the investor open a Chinese Restaurant?

Target Audience

This project is particularly useful to developers and investors looking to open or invest in Chinese restaurant in the city of New York. Overall, New York is a great place to open a restaurant with an ethnical cuisine. Thanks to the integration of different cultures, New York has become the multi-ethnic city par excellence, with more than one million Chinese residents. Chinese food has effectively become part of New York cuisine and its demand is very high.

Data

In order to answer to the previous questions, we will get the services of Foursquare API utilized via the Python Request library to explore the data of New York City, in terms of its neighborhood, including boundaries, latitude and longitude. The data also include the information about the places around each neighborhood like restaurants, hotels, coffee shops, parks, theaters, art galleries, museums and many more, their ratings and tips.

New York City data containing the neighborhoods and boroughs, latitude and longitudes will be obtained from the data source:

https://cocl.us/new_york_dataset

We will use machine learning technique, "clustering" to segment the neighborhoods with similar objects on the basis of each neighborhood data. These objects will be given priority on the basis of foot traffic (activity) in their respective neighborhoods. This will help to locate the tourist's areas and hubs.