

# Explore Chinese Restaurants in New York City

## 1. Introduction

The City of New York, usually called either **New York City (NYC)** or simply **New York (NY)**, is the most populous city in the United States.

New York City consists of five boroughs, each of which is a separate county of the State of New York. The five boroughs – Brooklyn, Queens, Manhattan, The Bronx, and Staten Island – were consolidated into a single city in 1898. 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 City 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.

New York City has the largest Chinese population of any city outside of Asia and within the U.S. with an estimated population of 573,388 in 2014 and continues to be a primary destination for new Chinese immigrants. New York City is subdivided into official municipal boroughs, which themselves are home to significant Chinese populations, with Brooklyn and Queens, adjacently located on Long Island, leading the fastest growth. After the City of New York itself, the boroughs of Queens and Brooklyn encompass the largest Chinese populations, respectively, of all municipalities in the United States.

So in this project, I will list and visualize all major parts of New York City that has great Chinese restaurants. People who want to run Chinese restaurant business should benefit from it.

## 2. Data

The following data will be used in the analysis:

- New York City data that contains list Boroughs, Neighborhoods along with their latitude and longitude.

- Data source: [https://cocl.us/new\\_york\\_dataset](https://cocl.us/new_york_dataset)

- Description: This dataset contains the 5 boroughs and the neighborhoods that exist in each borough as well as the latitude and longitude coordinates of each neighborhood.

- Chinese restaurants in each neighborhood of NYC.

- Data source: Foursquare API
  - Description: Start utilizing the Foursquare API to explore the neighborhoods and get Chinese restaurants in each neighborhood.
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- GeoSpace data
    - Data source: <https://data.cityofnewyork.us/City-Government/Borough-Boundaries/tqmj-j8zm>
    - Description: By using this geo space data we will get the New York Borough boundaries that will help us visualize choropleth map.

### 3. Methodology

- Download and Explore Dataset [https://cocl.us/new\\_york\\_dataset](https://cocl.us/new_york_dataset)
- Using FourSquare API we will find all venues for each neighborhood.
- Filter out all venues that are Chinese Restaurants.
- Find rating, tips and like count for each Chinese Restaurants using Foursquare API.
- Using rating for each restaurant, we will sort that data.
- Visualize the Ranking of neighborhoods using folium library (python)

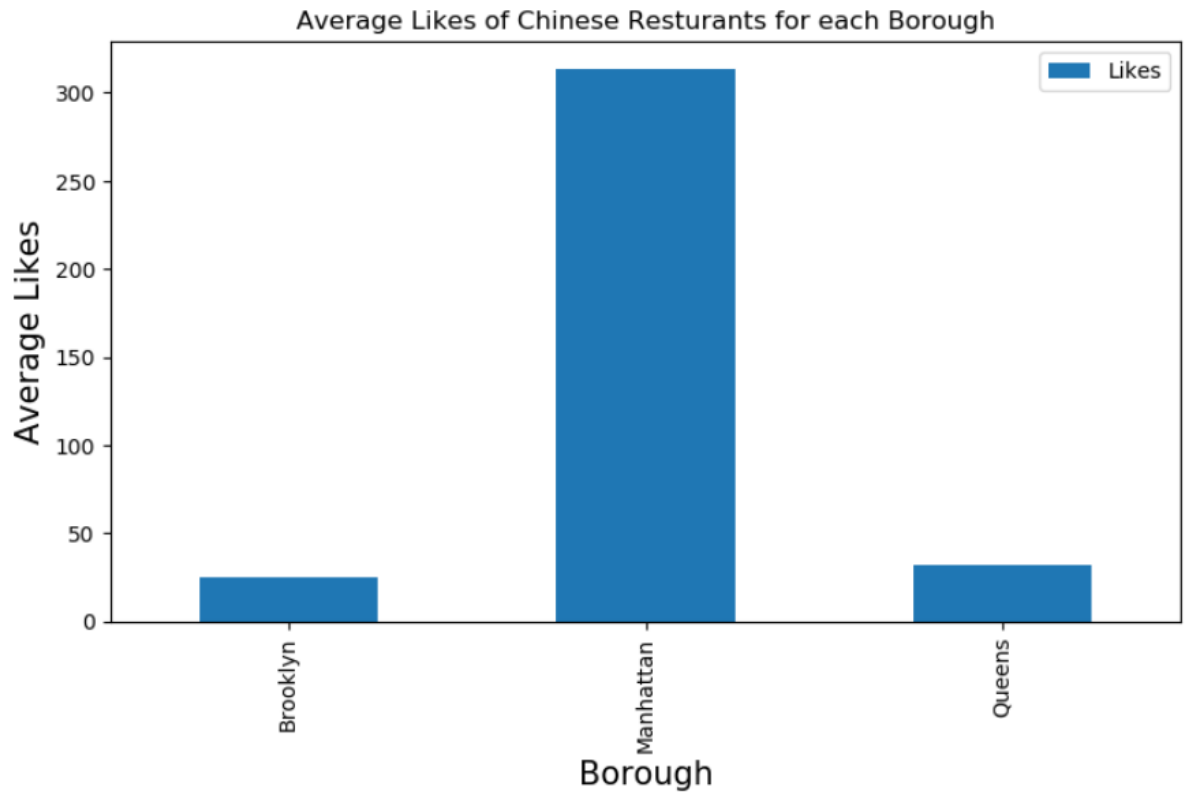
## 4. Results



From the plot, we can see that Queens and Brooklyn have the largest number of Chinese restaurants. Because Queens/Brooklyn has largest Chinese population and Manhattan is the third largest population of New York City. So next let us do further analysis on these three Boroughs. Get price/likes/tips details for each Chinese restaurants in these three Boroughs.

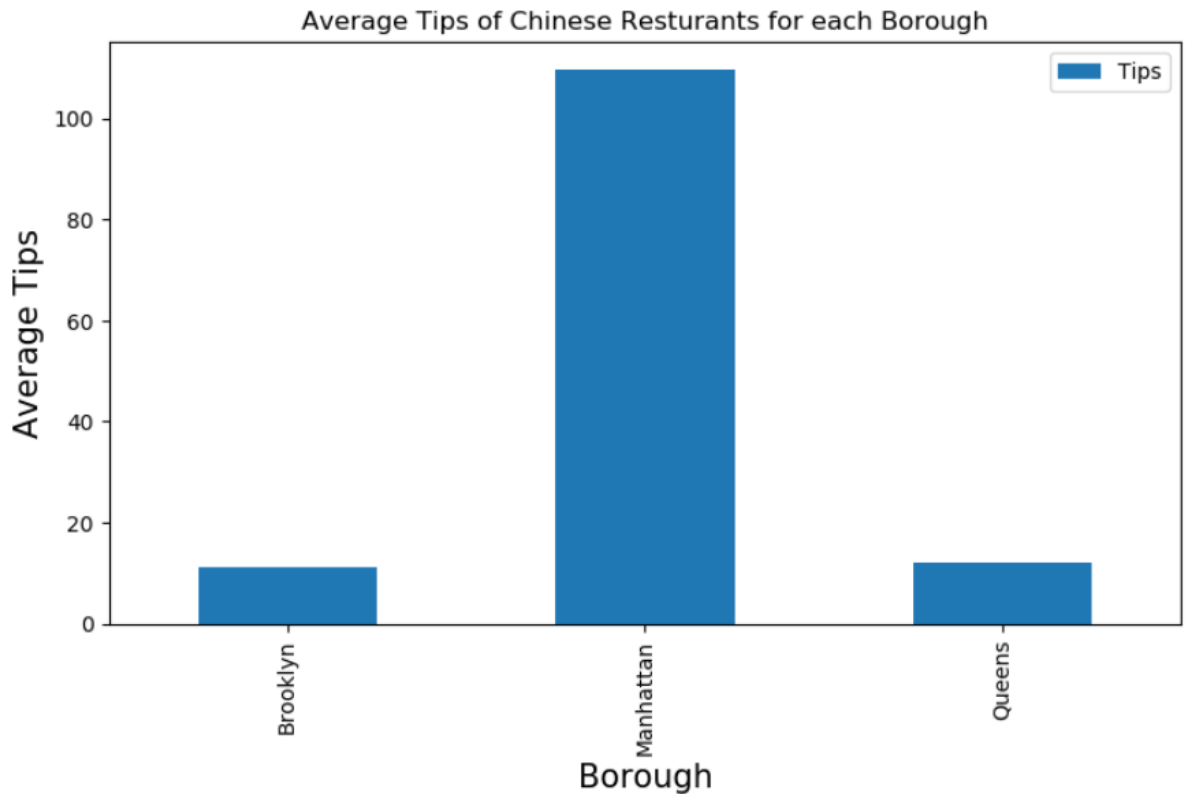
### 4.1 Likes

Borough	Average Likes
Manhattan	313.384615
Queens	31.793651
Brooklyn	25.333333



## 4.2 Tips

Borough	Average Tips
Manhattan	109.653846
Queens	11.968254
Brooklyn	11.200000



### 4.3 Price

Borough	Price	
Brooklyn	Cheap	86.666667
	Expensive	4.444444
	Moderate	8.888889
Manhattan	Cheap	61.538462
	Expensive	19.230769
	Moderate	19.230769
Queens	Cheap	80.952381
	Moderate	19.047619

## 5. Conclusion

- Queens, Brooklyn are top two boroughs that have most Chinese restaurants.
- Manhattan have potential Chinese Restaurant Market.
- Manhattan has the top average number of "Likes" and the average number of "Tips"
- The majority group of Chinese restaurants charge low price. But Manhattan has some top grade Chinese restaurants.

## **6. Limitations**

- The accuracy of data depends purely on the data provided by Foursquare.
- Not all the restaurants got rating so rating is not included in the analysis.