Capstone Project - The Battle of Neighborhoods

Finding the best neighborhood for Chinese Food

Alex Ward

Introduction:

According to the US census bureau, the US Asian population had the highest growth rate of 72% between 2000 and 2015. The largest group of Asians with high growth was Chinese Americans, and the city with the largest increase in Chinese population was NYC. My project will be to determine where in NYC someone should go if they want the best Chinese food.

There are 306 neighborhoods in the NY city area. My goal is to find the neighborhood with the most Chinese restaurants, then pick a great restaurant to go to in the area. My idea is that an area with a high density of Chinese restaurants would have more competition, so the restaurants in the area would have to be really good in order to survive

Data

For this project I will use:

https://cocl.us/new_york_dataset (to determine neighborhoods and boroughs with their coordinates)

Foursquare API (to sort and find the ratings of venues)

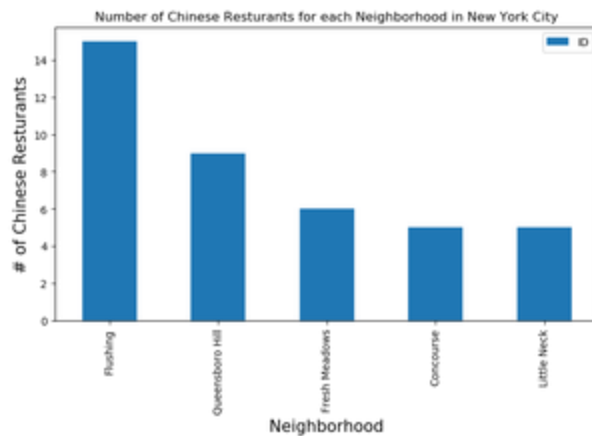https://data.cityofnewyork.us/City-Government/Borough-Boundaries/tqmj-j8zm (geo space data on boundaries)

Using this data, I will use the neighborhood and Foursquare data to determine which neighborhoods have the most Chinese restaurants and verify that they have good ratings. I will also visualize the data by both restaurant density and rating for the neighborhood. This will help people determine where in NYC is best for Chinese food.

Methodology

First we need to determine what neighborhood has the most Chinese restaurants. This is done by using FourSquare to search each neighborhood for the number of Chinese restaurants.

First, we see Queens has the most Chinese restaurants.

And from Queens, we see that Flushing is the neighborhood with the most Chinese restaurants.

Therefore, by focusing on Flushing, we should be able to find a great Chinese restaurant. We will do this by identifying all the Chinese restaurants in the neighborhood.
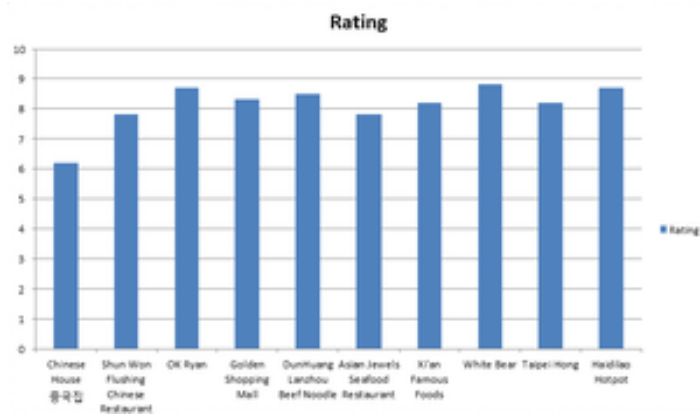
	Borough	Neighborhood	ID	Name
187	Queens	Flushing	5747a89b498ee4b7a5106556	DunHuang Lanzhou Beef Noodle
188	Queens	Flushing	52235ea211d2fe55782d764c	Dong Yi Feng
189	Queens	Flushing	4fa3f81be4b0a34ac673bf1e	Taipei Hong 台北苏
190	Queens	Flushing	4abfef82f964a520179320e3	New Imperial Palace 東越
191	Queens	Flushing	4ef37491d3e32dc398c7c5c7	Laoma Mala Tang
192	Queens	Flushing	4faf7eae4b0368055801cde	X'ian Famous Foods
193	Queens	Flushing	4a1845c8f964a52092791fe3	Asian Jewels Seafood Restaurant 鉅城海鮮酒家
194	Queens	Flushing	4ad50f59f964a520950121e3	Fu Run 扶閭東北美食
195	Queens	Flushing	4c78756397828cfaec16d8fe	New Golden Szechuan Chinese Restaurant
196	Queens	Flushing	4d1bcddc1356224bc5410abe	OK Ryan
197	Queens	Flushing	5990ab0a826444188d18dabc	Szechuan House
198	Queens	Flushing	4ac38218f964a520929b20e3	Golden Shopping Mall
199	Queens	Flushing	4ccf3d177f56a1430d3fc6a6	Henan Feng Wei 河南風味
200	Queens	Flushing	4e026cd7fa76007240170736	Lan Zhou Hand Made Noodle
201	Queens	Flushing	55a04fb7498e18131da5d46e	Shun Won Flushing Chinese Restaurant

Now that we have a list of restaurants in Flushing, we can determine a high rated one in the area. We will start by making a map with the town hall as the center point and plot the restaurants around it.

And from there we can see the restaurants are centered along main street. We will pick restaurants close to the center and check their ratings and reviews. We will create a table of the 10 restaurants at the center of the cluster and look at their ratings.

Results

Rating

Discussion

The results of high rating Chines restaurants in Flushing justifies my idea that high competition creates good restaurants, since they all have pretty high ratings. And seeing as White Bear has the highest rating among these, I feel confident saying that it is a great Chinese restaurant.

Conclusion

      In this report, I determined which neighborhood in NYC had the most Chines restaurants and was able to show that increased competition helped facilitate high rating restaurants. I believe this is a very affective model for determining where would be best for good food of a type of restaurant. This is because competition helps improve the quality of the restaurants. When people have options, only the best would survive. This model should apply to any type of industry with competition, even outside of restaurants such as auto repair shops or event venues.