Battle of the Neighborhoods
Applied Data Science Capstone

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Introduction:

Lee requested assistance from a data scientist in aiding Lee's decision on where to live in New York City, as he begins his graduate studies there. He cannot live without Korean food. He is also exploring his dream of opening a Korean restaurant of his own, preferably in a borough with less competition

Business Problem:

Without price constraints, Lee would like to find a suitable neighborhood in which he can rent an apartment based on the following criteria:

Within the three boroughs of Manhattan, Brooklyn and the Bronx,

- Which neighborhood has the highest concentration of Korean restaurants?

- Which neighborhood has Korean restaurants with the highest average ratings?

- Which borough has the least number of Korean restaurants?

The Data

The data sources used for this exercise comes from the following:

1) New York City neighborhood data from https://cocl.us/new_york_dataset

2) The number, location and ratings of Korean restaurants will be from FourSquare

– The two subsets of data were merged to form one master dataset; filtered based on Lee's requirements
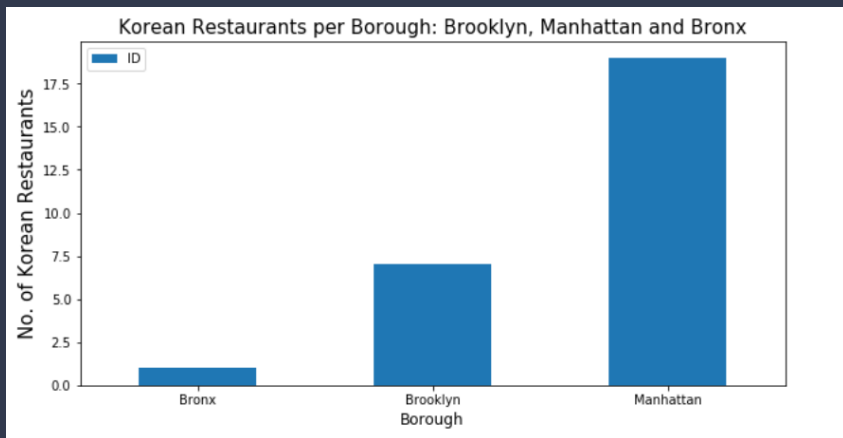
Findings: Part 1

Figure 1

- According to Figure 1, we can see that the Bronx has the least number of Korean restaurants, while Manhattan has the most number of Korean restaurants
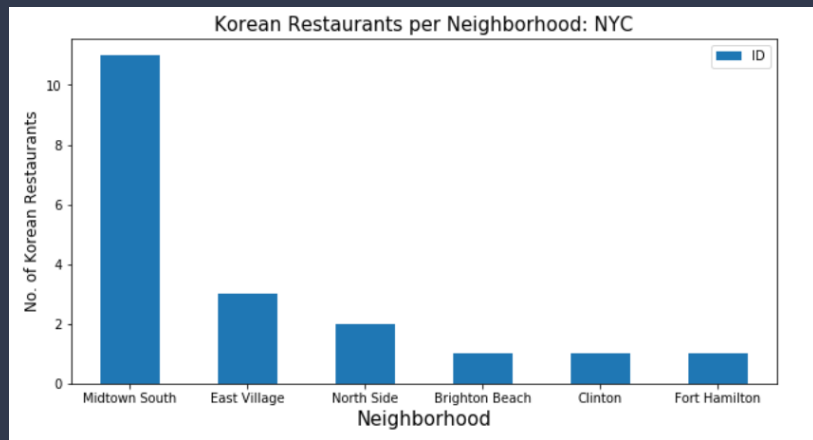
Findings: Part 2

Figure 2

- According to Figure 2, we observe that on a neighborhood basis, Midtown South has the most number of Korean restaurants. This is expected since the neighborhood is home to Manhattan's K-town
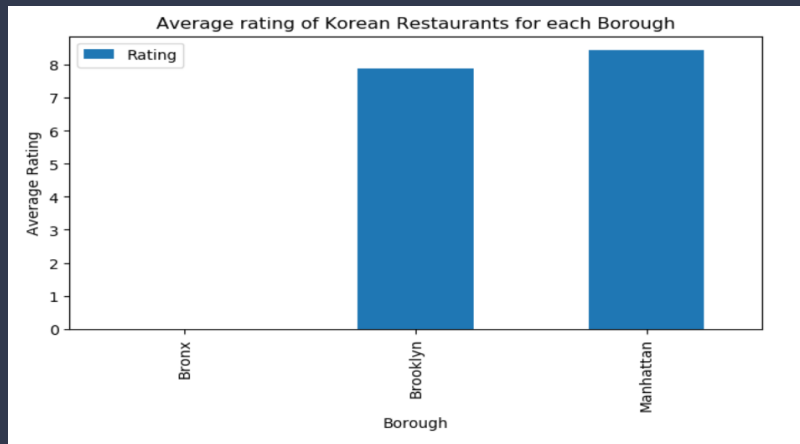
Findings: Part 3

Figure 3

- Similarly, from Figure 3 we observe that Manhattan has the highest average ratings out of the three boroughs of interest, though Brooklyn is not far behind. The missing data for the Bronx is likely due to unavailable data in FourSquare

Findings: Part 4

	Neighborhood	Average Rating
10	Tribeca	8.900000
2	East Village	8.800000
8	Prospect Heights	8.500000
6	Midtown South	8.463636
9	South Side	8.400000
13	Williamsburg	8.400000
1	Clinton	8.300000
12	West Village	8.300000
5	Manhattan Valley	8.100000
7	North Side	8.100000

Figure 4

- However, as seen in Figure 4, the neighborhood with the highest average ratings is not located in Midtown South (the location of Manhattan's K-town), but in the Lower Manhattan neighborhoods of Tribeca and East Village

Recommendations

- If Lee's goal is to live in a neighborhood with abundant Korean restaurants, he should live in Midtown South

- If Lee's goal is to live in a neighborhood with Korean restaurants of high ratings, he should live in Tribeca, East Village or Prospect Heights

- If Lee's goal is to open a Korean restaurant in the future, with less competition in mind, he should open one in the Bronx