Battle of the neighbourhoods - final project report

Introduction
Description of the problem
New York City is a major city located in the United States of America. It is a hub of multiculturalism and provides several opportunities for new businesses. New York City is famous for the excellent food scene. We are looking to create a food guide for Asian restaurants in New York City, to be used by tourists. For this we need to identify the various types of restaurants and their locations. Finally we identify the area with maximum number of Asian restaurants.

Discussion of the background
We will identify the various neighbourhoods in New York and locate the different restaurants located within these neighbourhoods. From these we will narrow our search to identify the Asian restaurants and finally to identify the area with maximum number of Asian restaurants. This will help tourists looking for this type of cuisine to locate the kind of food they wish to eat.

Audience
Tourists looking for Asian cuisine in New York City

Description of the data and how it will be used to solve the problem
Data to be used will include the following
1. Various neighbourhoods and boroughs
2. Type of cuisines available

Data to be used is available at the following links:
https://geo.nyu.edu/catalog/nyu_2451_34572
https://en.wikipedia.org/wiki/Portal:New_York_City
https://en.wikipedia.org/wiki/Cuisine_of_New_York_City

We will subsequently use Foursquare API to explore the neighbourhoods in detail to arrive at our recommendation by looking at type of restaurant cuisine, tips, latitude, longitude, venue and venue category.

Methodology
• Extract data relating to New York neighbourhoods and create dataframe
• Extract geographical coordinates and map of New York City with all neighbourhoods
• Extract venues information using Foursquare API
• From overall venues information, extract restaurants data only
• From total restaurants data, extract the restaurants serving Asian cuisine
• Create a dataframe highlighting the neighbourhood and the various type of restaurants serving Asian cuisine in that neighbourhood

Results
The top neighbourhoods in New York which have 15 or more Asian restaurants are
• Murray Hill - 35
• Chinatown - 29
• Midtown South - 19
• Flushing - 18
• Sunnyside Gardens - 16
• Turtle Bay - 16
• East Village - 15
• Elmhurst - 15

Discussion
Observations and recommendations
• 17 types of Asian cuisine were considered, concentrating on East Asian and South East Asian food.
• The top 5 most popular types of Asian restaurants in New York are - Chinese, Sushi, Japanese, Thai and Korean.

- For the top 5 cuisines, the areas with most number of restaurants are the following
  1. Chinese - Chinatown
  2. Sushi - Turtle Bay
  3. Japanese - Murray Hill
  4. Thai - Elmhurst
  5. Korean - Murray Hill

Conclusion
This data analysis is useful for anyone who requires a guide to Asian restaurants in New York City, as it provides the details of the neighbourhoods, as well as the type of Asian cuisine available in the area.