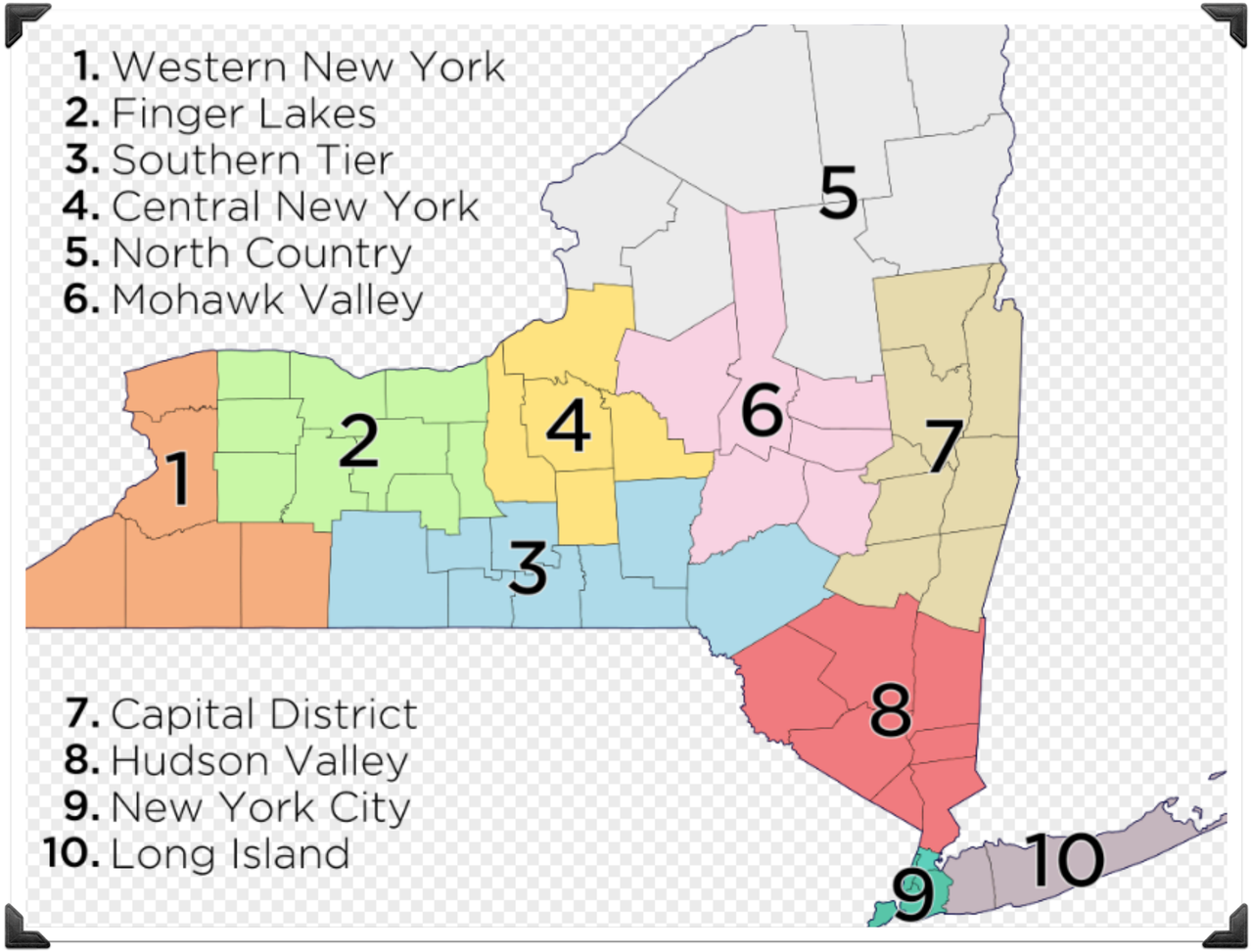
The Battle of Neighborhoods

Open restaurant in New York City

12/30/2020

Instruction

- Background
- Problem
- Interest



Data Description

Data Source

- **Wikipedia :** https://en.wikipedia.org/wiki/New_York_City
- **Google Map :** to search for nearby places and explore the area.
- **FourSquare API :** to research for venues, learn more about particular venues, and explore FourSquare users.

Data Processing

- Download the files and place it on the server.
- Load the data to the notebook.
- Clean the data, and transfer into a pandas data frame to explore.
- Exam the resulting data frame.
- Use goopy library to get the latitude and longitude values of New York City.

New York City

```
## Package Plan ##

  environment location: /home/jupyterlab/conda/envs/python

  added / updated specs:
    - geopy


The following packages will be downloaded:

    package                    |            build
    ---------------------------|-----------------
    geographiclib-1.50         |             py_0          34 KB  conda-forge
    geopy-2.1.0                |     pyhd3deb0d_0          64 KB  conda-forge
    ------------------------------------------------------------
                                           Total:          98 KB

The following NEW packages will be INSTALLED:

  geographiclib      conda-forge/noarch::geographiclib-1.50-py_0
  geopy              conda-forge/noarch::geopy-2.1.0-pyhd3deb0d_0



Downloading and Extracting Packages
geopy-2.1.0           | 64 KB     | ##################################### | 100%
geographiclib-1.50    | 34 KB     | ##################################### | 100%
Preparing transaction: done
Verifying transaction: done
Executing transaction: done
The geograpical coordinate of New York City are 40.7127281, -74.0060152.
```

Methodology

- Github repository
- Python folium library : to visualize geographic of New York City and its boroughs.
- FourSquare API : to explore the boroughs and segment them.
- Some basic lumpy, pandas, and other basis fundamental methods.

New York City

Neighborhoods.head()

	Borough	Neighborhood	Latitude	Longitude
0	Bronx	Wakefield	40.894705	-73.847201
1	Bronx	Co-op City	40.874294	-73.829939
2	Bronx	Eastchester	40.887556	-73.827806
3	Bronx	Fieldston	40.895437	-73.905643
4	Bronx	Riverdale	40.890834	-73.912585

Manhattan

manhattan_data.head()

	Borough	Neighborhood	Latitude	Longitude
0	Manhattan	Marble Hill	40.876551	-73.910660
1	Manhattan	Chinatown	40.715618	-73.994279
2	Manhattan	Washington Heights	40.851903	-73.936900
3	Manhattan	Inwood	40.867684	-73.921210
4	Manhattan	Hamilton Heights	40.823604	-73.949688

Results

New York City

- Current status: New York City is one of the world’s most populous megacities. Investor could choose their preferable neighborhoods to open restaurant.
- Opinion: the neighborhoods should be more crowds and more developed.

Discussion

From data of top 10 common venues in New York City, there are plenty of the best place for investors to open a restaurant, that means investor have lots of choices. The data only told us the current numbers of each kind of venues, but no other factors such as cost of the place or environment. The investor should compare each neighborhoods and find the preferable place to open restaurant.

Conclusion

As a result, The investors to open a restaurant in New York city should consider several factors. First , consider the number of restaurants in different neighborhoods of each district of New York. Second is the population of different districts, which depends on the kinds of venues in different areas. For example,If the restaurant is opened close to downtown, it must be more people.

The investors should consider competitive restaurants in the same district also. Try not to open restaurant with more similar restaurants nearby. It helps restaurant get easy start.