



IBM Applied Data Science Capstone
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Finding the Best Spot to Open an Italian Restaurant in New York City

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Business Problem

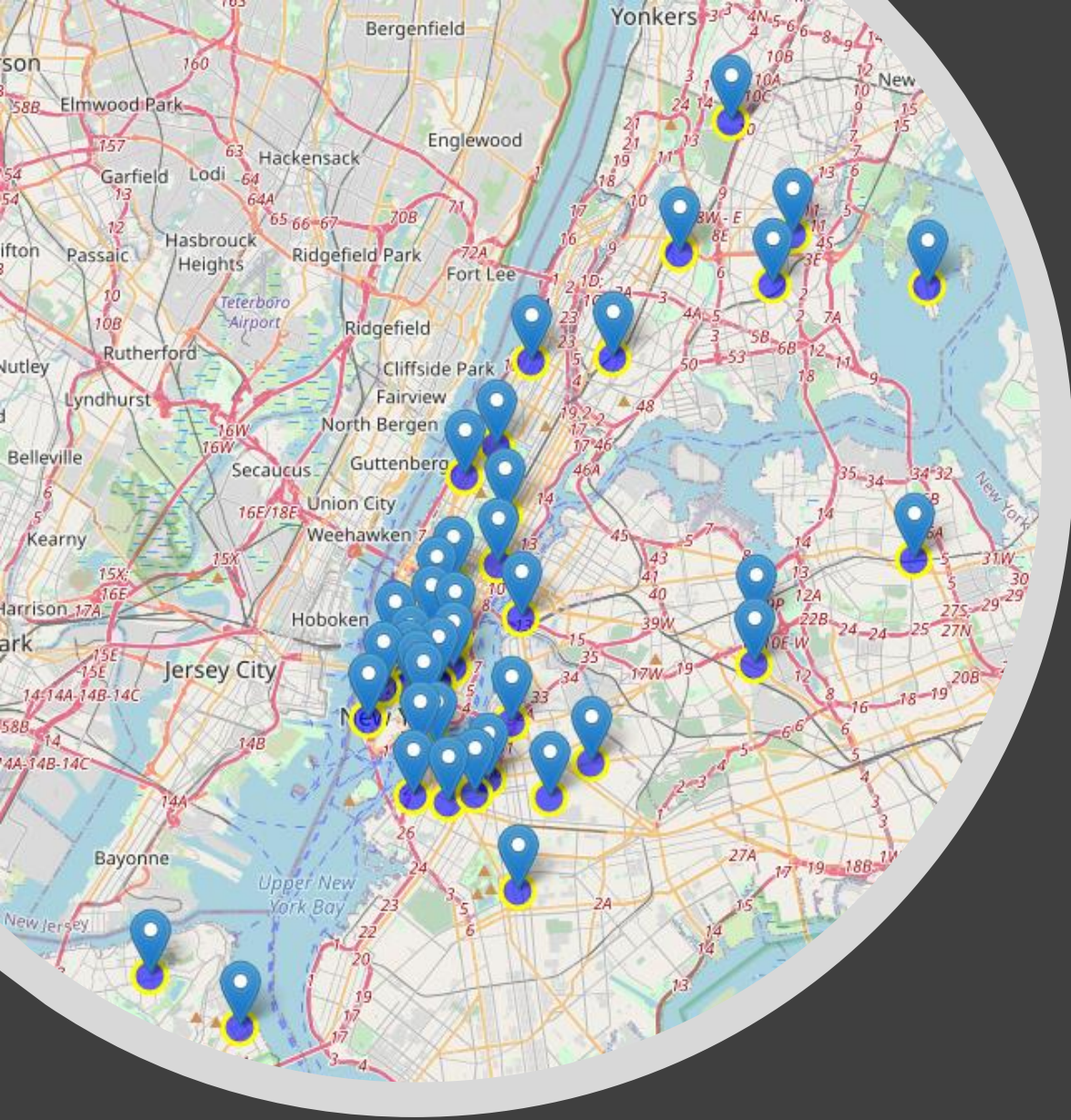
- The objective of this project is to analyze and find the best areas of New York City to open a new Italian restaurant. I use Data Science methodology in addition to Data Analysis and Data Visualization to answer the question: Where is the best place to open a new Italian restaurant in New York City?

Data

- **Data required**
 - NYC data containing both neighborhoods and boroughs.
 - Latitude and longitude data of neighborhoods so we can plot them.
 - Venue and restaurant data to perform analysis of opportunity and competition in specific neighborhoods.
- **Data sources**
 - Open data source for New York: https://cocl.us/new_york_dataset
 - Foursquare API venue data
 - Python Geocoder package for latitude and longitude data

Methodology

- Use the open data source https://cocl.us/new_york_dataset to get the neighborhoods and boroughs data
- Use the Python Geocoder package to obtain the latitude and longitude of the neighborhoods. We will then use the Foursquare API to get the venue data for the neighborhoods.
- We will sort the data based on the rankings in Foursquare.
- We will then use Folium for data visualization.



Results

- Queens has the highest number of neighborhoods
- Although Manhattan has the fewest neighborhoods, it has the highest number of Italian restaurants.
- Despite Manhattan having the largest number of Italian restaurants, the neighborhood with the highest number of restaurants is Belmont with 17.
- Manhattan and the Bronx have the two highest average ratings for Italian restaurants.
- Queens and Staten Island have the two lowest average ratings.

Discussion Section

- Based on our analysis, Manhattan and the Bronx are the two best places in NYC for Italian food.
- Queens and Staten Island are more promising locations to open a new restaurant.
- Queens has the 2nd lowest average rating of Italian restaurants and the fewest number of restaurants of any borough.

Conclusions

- The best place to open a new Italian restaurant in NYC is Queens.
- The findings of our project will help prospective developers and investors understand the pros and cons of opening an Italian restaurant in different boroughs and neighborhoods of New York City.