RESTAURANT SUPPLY CO. EXPANSION IN NYC

Fabio Nozoy April 28, 2021

Restaurant Supply Co. expansion in NYC

- “Restaurant Supply Co” is an enterprise dedicated to supply a numerous items of material for restaurants. The company wants to ingress in the New York City to dispute with various competitors.
- Location and salary in New York City are very expensive. Those 2 resources have to be optimal.
- As expansion will be in phases.
  - For phase 1 the demand is a study of the most quantity of restaurants per Neighborhood
  - For phase 2 requirement is to determine various locations for the Sales Teams in the City attending to some assumptions:
    - At most 40 restaurants per salesman
    - At most 5 salesman per location

Data

Data collection

- For this case, it makes sense to use the newyork_data.json data available on Coursera. It has NYC information's like 'Borough', 'Neighborhood', 'Latitude' and 'Longitude'.
- foursquare.com has the list of points of interest that is assessable using explore API. For this case it is required the Asset Category, Latitude and Longitude.

Data cleaning

- Data collected from multiple sources were combined into one DataFrame, that were populated with a lot of undesired NYC points of interest. As there were not a single category such as restaurant or food, the categories were filtered using the following words: restaurant, bakery, coffee, café, bar, breakfast, burger, creperie, food, gastro, hot dog, pub and steakhouse.

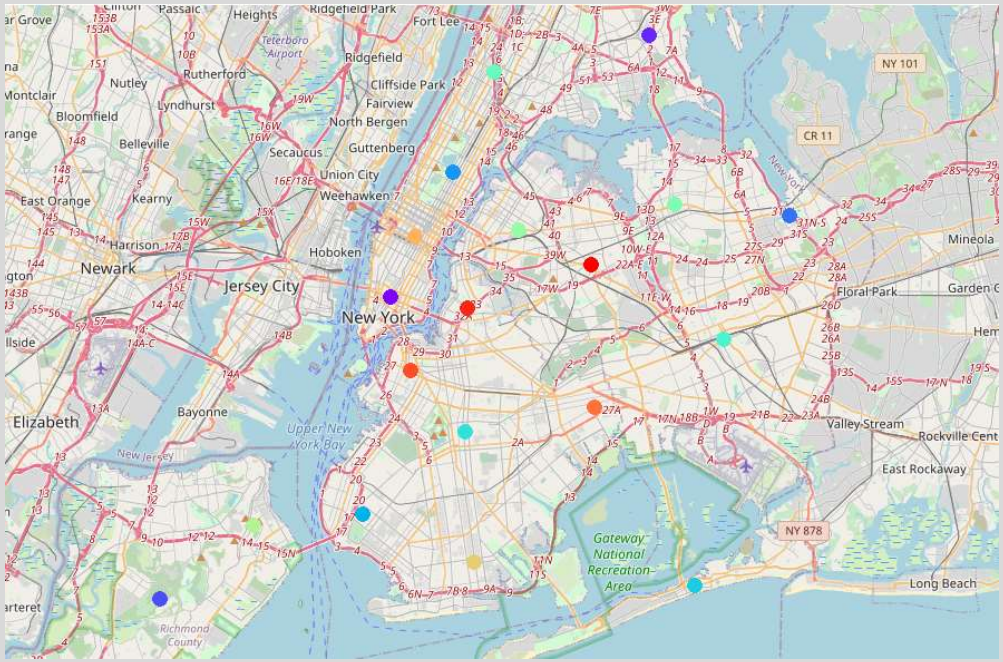
Analysis

TOP neighborhoods

Neighborhood	counts
Murray Hill	88
Astoria	65
Upper West Side	63
South Side	61
East Village	60
Turtle Bay	57
Greenwich Village	55
Chinatown	55
Noho	55
North Side	54
Prospect Heights	53

Top 10 neighborhood represents 15% of 4111 restaurants of NYC

21 centers of Sales Team scientifically distributed



Best distribution for optimum results

Conclusion

- Purpose of this project was to identify NYC areas high number of restaurants in order to aid stakeholders in narrowing down the search for optimal location for restaurant supplies sales. By calculating restaurant density distribution from Foursquare data we have first identified to 10 Neighborhoods with Murray Hill at the top with 88 restaurants, and then generated extensive collection of locations which satisfy some basic requirements regarding existing nearby restaurants. Clustering of those locations was then performed in order to balance Sales Team centers, and addresses of those zone centers were created to be used as starting points for final exploration by stakeholders.