## Battle of the Neighborhoods

Preferred Borough for Pizza Lovers
Aman Joshi
18-May-20

# **Problem Description**

- A tourist wants to visit New York for a trip
- He is a Pizza lover
- Find Borough where pizza is easily accessible
- Find Borough which has maximum Pizza Places
- Find Borough with highest density of Pizza Places

### Data

- Pizza places in various boroughs
- Data of Borough and Neighborhoods with Lat Lang data
- Sources: <a href="https://geo.nyu.edu/catalog/nyu 2451 34572">https://geo.nyu.edu/catalog/nyu 2451 34572</a>, <a href="https://cocl.us/new\_york\_dataset">https://cocl.us/new\_york\_dataset</a>, Using Foursquare API

#### Possible Destinations

There are 5 Borough in NYC:

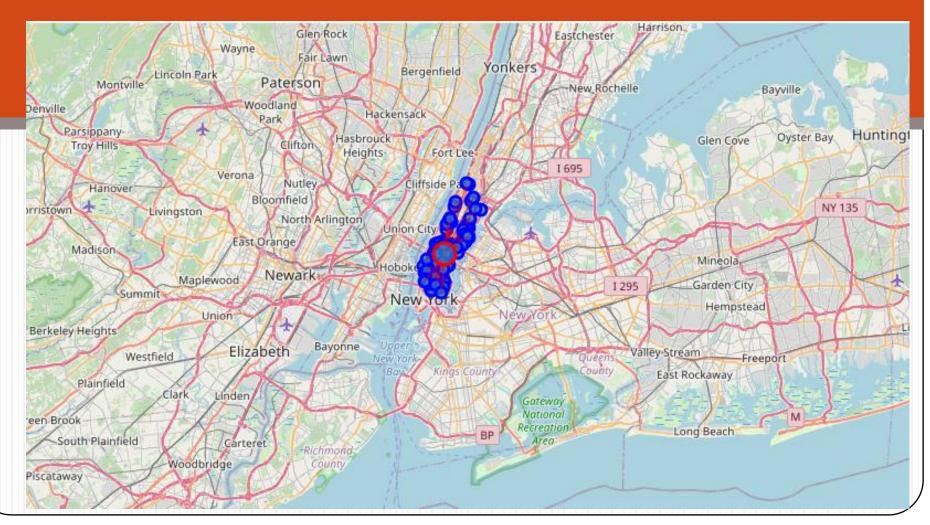
- Bronx
- Manhattan
- Brooklyn
- Queens
- Staten Island

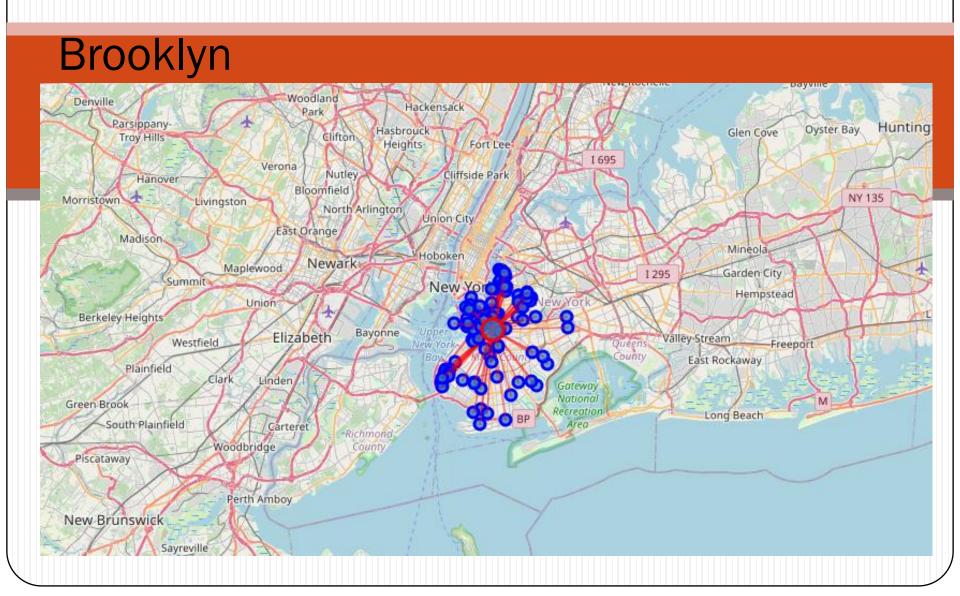
## Methodology

- Finding the Borough with highest Pizza Places
  - Means demand is high
  - High competition may lead to better quality
- Finding the Borough with highest density of Pizza Places
  - Easy access to other pizza places

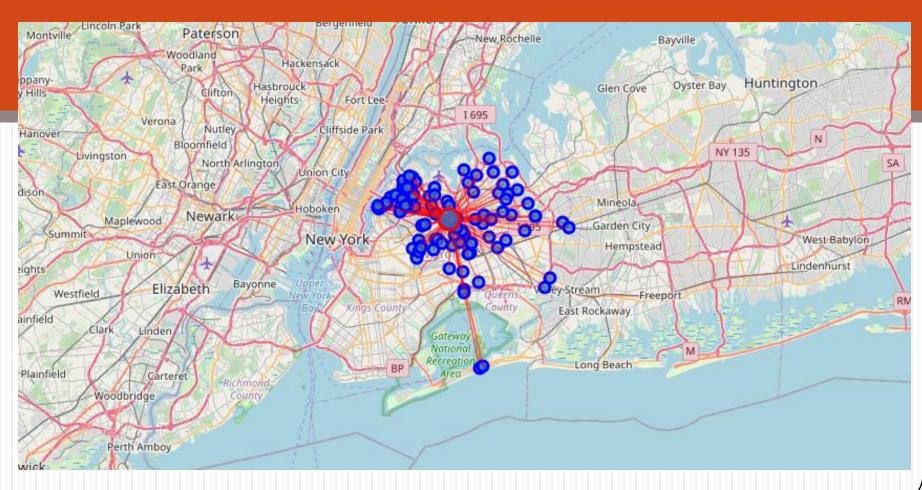
#### Bronx New Canaan Westport Fairfie West Milford Norwalk Suffern Ringwood Spring Valley Mount Pleasant Mahwah Nanuet Darien-Tarrytown Ramsey Stamford Wanaque White Plains Greenwich Passaic Oakland Dobbs Ferry Wyckoff Port Chester Westwood Ridgewood Harrison Glen-Rock Eastchester Wayne Fair Lawn Yonkers Bergenfield Lincoln Park Paterson New Rochelle Bayville Woodland ville Hackensack Parsippany-Huntington Oyster Bay. Hasbrouck Glen Cove Clifton Troy Hills Heights-Fort Lee Verona Cliffside Park Nutley Hanover N Bloomfield NY 135 town Livingston North Arlington SA Union City East Orange Madison Mineola Hoboken Newark Maplewood 1295 Garden City Summit New York West Babylon Hempstead Union Lindenhurst keley Heights Bayonne

#### Manhattan

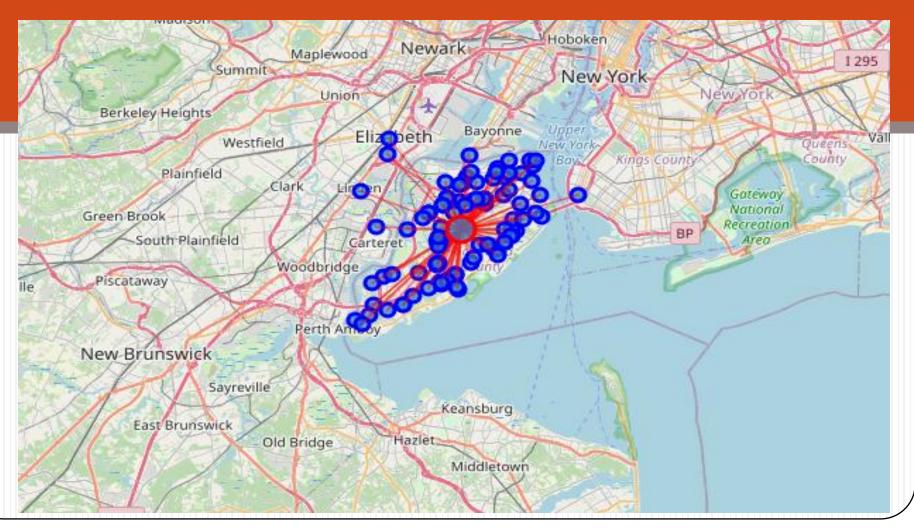




### Queens



#### Staten Island



#### Results

#### **Highest Number of Pizza Places**

```
Total number of pizza places in Bronx = 158
Showing Top 100
Total number of pizza places in Manhattan = 252
Showing Top 100
Total number of pizza places in Brooklyn = 232
Showing Top 100
Total number of pizza places in Queens = 188
Showing Top 100
Total number of pizza places in Staten Island = 140
Showing Top 100
```

The ranking as per the number of pizza places is:

- 1. Manhattan
- 2. Brooklyn
- 3. Bronx
- 4. Queens
- 5. Staten Island

#### Results

#### **Highest Density of Pizza Places**

Bronx
Mean Distance from Mean coordinates
0.03498701585170117
Manhattan
Mean Distance from Mean coordinates
0.025780434583878624
Brooklyn
Mean Distance from Mean coordinates
0.0455394088214408
Queens
Mean Distance from Mean coordinates
0.06189604575236819
Staten Island
Mean Distance from Mean coordinates
0.05600907549251621

The ranking as per the density of pizza places is:

- 1. Manhattan
- 2. Bronx
- 3. Brooklyn
- 4. Queens
- 5. Staten Island

#### Conclusion

• From both the result sets Manhattan is the Borough which should the most preferred one

## Future Scope

• Attributes such as ratings of the pizza place and pizza type preference (Thin Crust etc) can also be considered