

# **Where to Build a Restaurant in NYC on the Basis of Rarity of Food Offerings per Neighborhood**

Benjamin Scullard – August 2020

# Introduction

- Someone wants to open a restaurant in New York City.
- This someone is not sure *where* in New York City to do so.
- However, they do know they do not want to open in a place filled with other food options.
- The goal of this project is to determine which neighborhood(s) in NYC contain(s) the fewest food-serving venues.

# Data

- The Foursquare location data was used to determine what kinds of venues are most common in any given neighborhood.

# Methodology

- Foursquare was used to:
  - Get a list of every neighborhood in NYC.
  - Show where they are on a map.
  - The number of venues per neighborhood (up to 100).
  - The mean of the frequency of each type of venue per neighborhood.
  - The top ten most common types of venue in every neighborhood.

# Methodology

The alphabetically first neighborhood:

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	Allerton	Pizza Place	Deli / Bodega	Supermarket	Chinese Restaurant	Department Store	Grocery Store	Check Cashing Service	Bus Station	Martial Arts School	Fast Food Restaurant

# Methodology

- What qualified as a food-serving venue:
  - Anything with “restaurant” in its name,
  - Or, anything on this list----->
- What did not qualify:
  - Grocery stores and (super)markets
    - Customers aren’t expected to eat in them
  - Venues more about drinking than eating
    - e.g. cocktail bars

```
food_list = ['Pizza Place',  
            'Breakfast Spot',  
            'Diner',  
            'Food', #real specific, that.  
            'Coffee Shop',  
            'Sandwich Place',  
            'Noodle House',  
            'Donut Shop',  
            'Burger Joint',  
            'Fried Chicken Joint',  
            'Pub', #some have a food menu  
            'Bar', #ditto  
            'Ice Cream Shop',  
            'Food Truck',  
            'Bakery',  
            'Bagel Shop',  
            'Café',  
            'Gourmet Shop',  
            'Dessert Shop',  
            'Food Court',  
            'Salad Place',  
            'Irish Pub',  
            'BBQ Joint',  
            'Bistro',  
            'Buffet',  
            'Burrito Place',  
            'Cafeteria',  
            'Creperie',  
            'Cupcake Shop',  
            'Fish & Chips Shop',  
            'Food & Drink Shop',  
            'Food Stand',  
            'Frozen Yogurt Shop',  
            'Gaming Cafe',  
            'Gastropub',  
            'Hot Dog Joint',  
            'Pie Shop',  
            'Sports Bar',  
            'Steakhouse',  
            'Taco Place']
```

# Results

- The best place to open a restaurant is a neighborhood with zero “Most Common Venue” spots taken by food options.

```
neighborhoods_venues_counted.loc[neighborhoods_venues_counted['# of Most Common Venue Positions Taken by Food-Serving Places']  
== 0]
```

Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue	# of Most Common Venue Positions Taken by Food-Serving Places
--------------	-----------------------------	-----------------------------	-----------------------------	-----------------------------	-----------------------------	-----------------------------	-----------------------------	-----------------------------	-----------------------------	------------------------------	---

- However, no such neighborhood exists in NYC.

# Results

- The best neighborhood, therefore, is one with one “Most Common” spot occupied by food. Five neighborhoods match that condition.

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue	# of Most Common Venue Positions Taken by Food-Serving Places
24	Bergen Beach	Harbor / Marina	Baseball Field	Athletics & Sports	Playground	Women's Store	Exhibit	Eye Doctor	Factory	Falafel Restaurant	Farm	1
29	Breezy Point	Beach	Monument / Landmark	Supermarket	Trail	Women's Store	Eye Doctor	Factory	Falafel Restaurant	Farm	Farmers Market	1
55	Clason Point	Park	Bus Stop	Convenience Store	Grocery Store	Pool	Boat or Ferry	South American Restaurant	Women's Store	Financial or Legal Service	Factory	1
94	Fieldston	Plaza	River	Music Venue	Bus Station	Women's Store	Eye Doctor	Factory	Falafel Restaurant	Farm	Farmers Market	1
222	Queensbridge	Sandwich Place	Hotel	Athletics & Sports	Hotel Bar	Gym / Fitness Center	Basketball Court	Baseball Field	Park	Scenic Lookout	Beer Garden	1



# Results

- Conversely, these five neighborhoods are the most food-crowded (no neighborhood had all ten spots occupied by food).

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue	# of Most Common Venue Positions Taken by Food-Serving Places
14	Bayside	Bar	Sushi Restaurant	Indian Restaurant	American Restaurant	Pizza Place	Mexican Restaurant	Steakhouse	Burger Joint	Spa	Bakery	9
206	Park Slope	Coffee Shop	Burger Joint	Pizza Place	Bagel Shop	Chinese Restaurant	Mexican Restaurant	Pub	Bakery	Pet Store	American Restaurant	9
245	Sheepshead Bay	Turkish Restaurant	Dessert Shop	Sandwich Place	Yoga Studio	Italian Restaurant	Creperie	Diner	Restaurant	Russian Restaurant	Pizza Place	9
278	Upper West Side	Italian Restaurant	Coffee Shop	Mediterranean Restaurant	Bakery	Bar	Indian Restaurant	Wine Bar	Pizza Place	Dessert Shop	Sports Bar	9
299	Woodside	Grocery Store	Bakery	Latin American Restaurant	Filipino Restaurant	Thai Restaurant	Bar	Donut Shop	American Restaurant	Pub	Café	9

# Discussion

- Knowing how many food options are in a neighborhood is helpful for someone opening a restaurant, but...
  - It is never specified *what kind* of restaurant is opening; someone opening a pizzeria will want to avoid a neighborhood filled with other pizzerias.
  - This project does not account for how remote an opening location might be, which may hamper success in getting customers to show up.
  - This project focuses *only* on the rarity of other food options in New York City neighborhoods; someone who wants to open a restaurant should remember to consider factors other than just this.

# Conclusion

- The best neighborhoods (meaning, the ones where other food options are rarest) to open a restaurant in New York City are:
  - Bergen Beach
  - Breezy Point
  - Clason Point
  - Fieldston
  - Queensbridge