Bagels in Brookyln

An expository look into revolutionizing the cream cheese industry

Introduction

New York City is a top bagel location

Brooklyn is a booming location for young people

The Proposal?

I will be opening a cream cheese specialty store in Brooklyn

I need to find the neighborhood(s) with the highest concentration of bagel shops in order to maximize profits and please my investors

Data Acquisition and Cleanings

NEW YORK CITY NEIGHBORHOOD DATA SORTED BY BOROUGH AND CONTAINING LATITUDE AND LONGITUDE WAS OBTAINED FROM THE IBM SKILLS LAB DATA FILE FOUND HERE.

FOURSQUARE API WAS UTILIZED IN ORDER TO FIND ALL OF THE NAMES AND CATEGORIES OF POINTS OF INTEREST IN BROOKLYN SPECIFICALLY.

Identification of Venues in Brooklyn Neighborhoods

+ Frequencies of venues in each neighb[orhood]
normalized and calculated

```
----Bedford Stuyvesant----
                    venue  freq
0             Coffee Shop  0.12
1                     Bar  0.09
2                    Café  0.06
3             Pizza Place  0.06
4     Japanese Restaurant  0.03
```

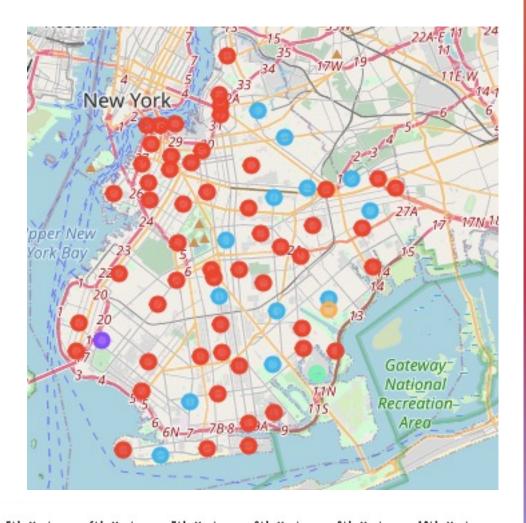|	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Bay Ridge	40.625801	-74.030621	Pilo Arts Day Spa and Salon	40.624748	-74.030591	Spa
1	Bay Ridge	40.625801	-74.030621	Bagel Boy	40.627896	-74.029335	Bagel Shop
2	Bay Ridge	40.625801	-74.030621	Leo's Casa Calamari	40.624200	-74.030931	Pizza Place
3	Bay Ridge	40.625801	-74.030621	Pegasus Cafe	40.623168	-74.031186	Breakfast Spot
4	Bay Ridge	40.625801	-74.030621	Georgian Dream Cafe and Bakery	40.625586	-74.030196	Caucasian Restaurant

Listing of Most Common Venues

+ The top 10 most common venues for every neighborhood were identified and put into a table

	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
0	Bath Beach	Chinese Restaurant	Pizza Place	Pharmacy	Bubble Tea Shop	Italian Restaurant	Donut Shop	Gas Station	Fast Food Restaurant	Cantonese Restauran
1	Bay Ridge	Spa	Pizza Place	Italian Restaurant	American Restaurant	Bar	Bagel Shop	Greek Restaurant	Sushi Restaurant	Hookah Ba
2	Bedford Stuyvesant	Coffee Shop	Bar	Café	Pizza Place	Deli / Bodega	Tiki Bar	Fried Chicken Joint	New American Restaurant	Bus Sto
3	Bensonhurst	Chinese Restaurant	Pizza Place	Italian Restaurant	Ice Cream Shop	Donut Shop	Sushi Restaurant	Sporting Goods Shop	Shabu-Shabu Restaurant	Noodle Hous
4	Bergen Beach	Harbor / Marina	Park	Baseball Field	Playground	Athletics & Sports	Yemeni Restaurant	Event Service	Event Space	Facto

Kmeans Clustering

+ Neighborhoods were clustered based on the most common venues

+ Cluster 2 (purple) identified Dyker Heights as being the only neighborhood where bagel shops are most common

	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
35	Dyker Heights	Bagel Shop	Plaza	Golf Course	Burger Joint	Dance Studio	Flea Market	Fish Market	Fish & Chips Shop	Filipino Restaurant	Field

Conclusions

+ Dyker heights will be the neighborhood for my cream cheese shop