

Opening a Indian restaurant in Queens, NY

Module 9, Week 5

June 2019

Background

In a city of New York, if someone is looking to open an Indian restaurant, in Queens borough of New York.

The intention is to open this restaurant in Queens borough as there is a general knowledge and understanding that there is high Indian population in Queens.

Before a lease is signed for a restaurant's location, homework must be done.

If it turns out that it wasn't a good location for a restaurant, it could cost a lot of money.

Data

New York primary has 5 boroughs and 300+ neighborhoods.

The process outlined here for Queens can be used for other borough as well.

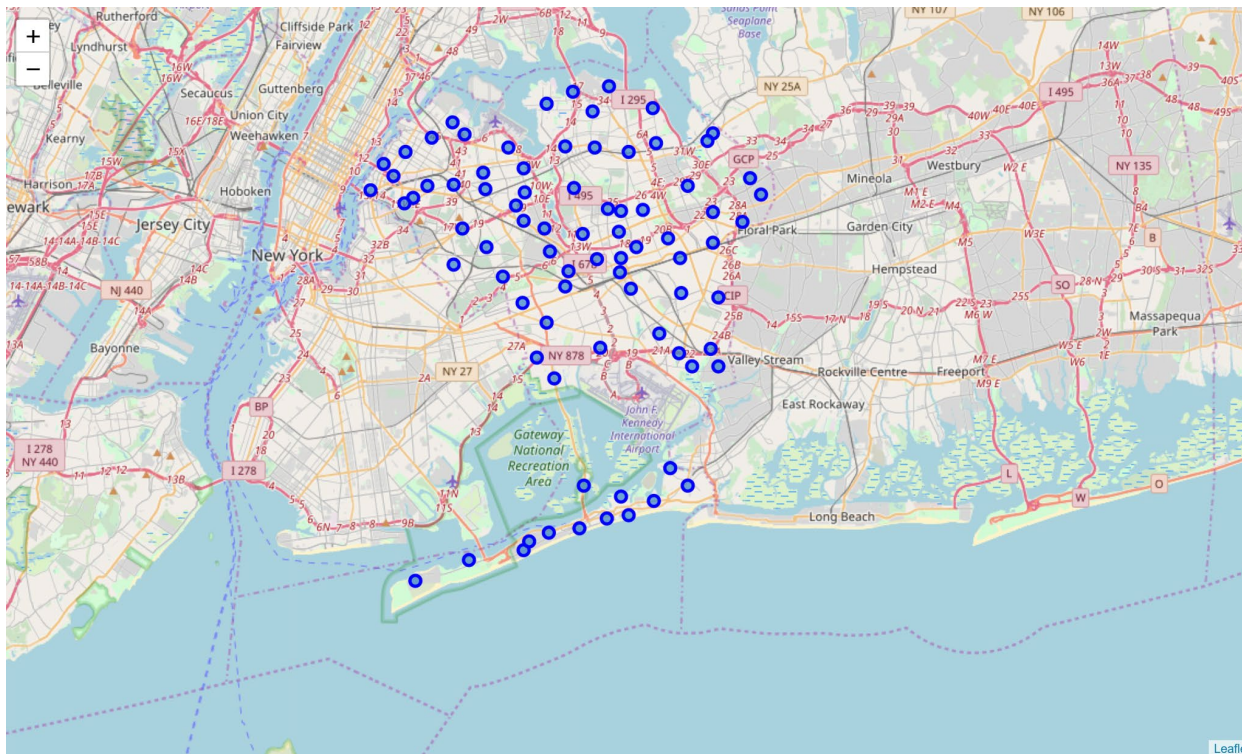
In order to determine whether Queens, NY is a good location to open the Indian restaurant, the neighborhoods were segmented and explored.

The dataset was used from NYU Spatial Data Repository from year 2014.

The Foursquare APIs were used to explore the neighborhoods.

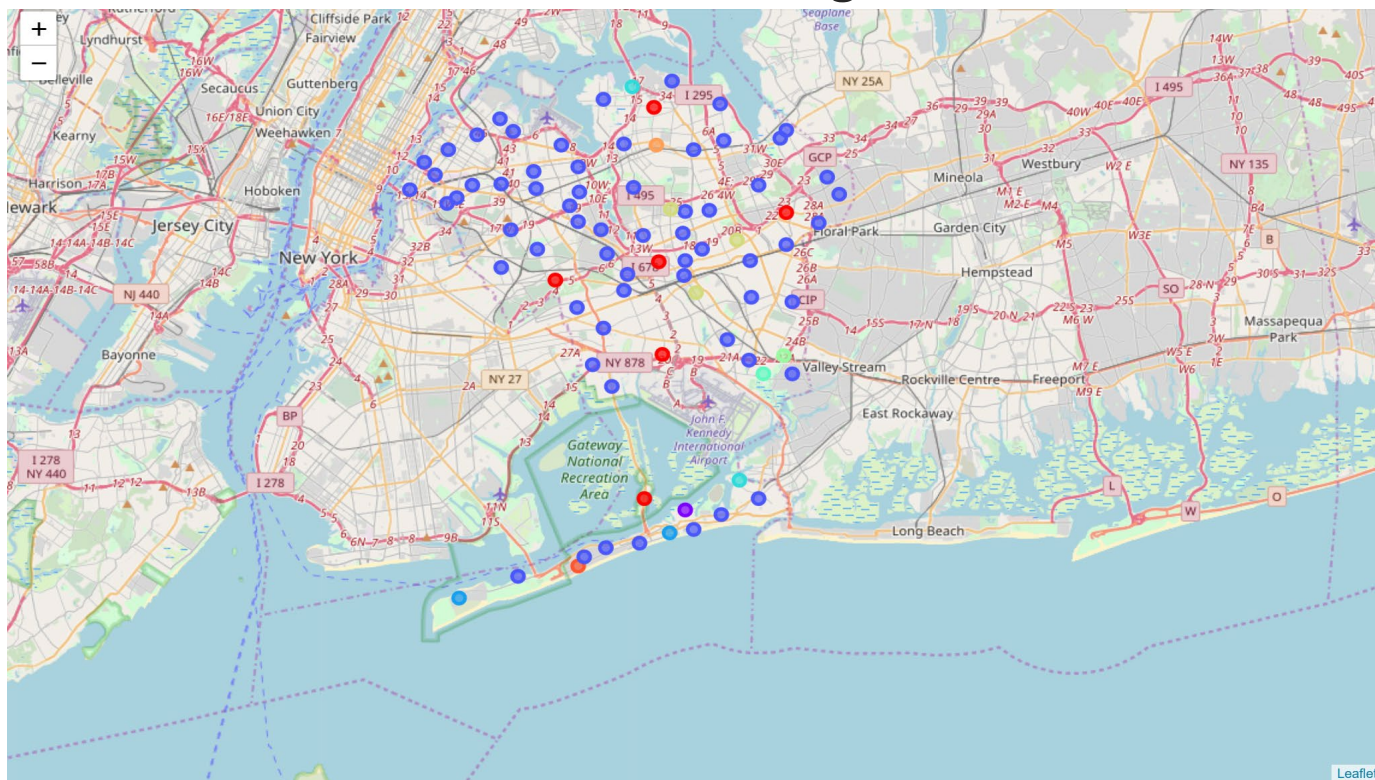
Queens Neighborhoods

For illustration purposes, the map was simplified, segmented and clustered for only the neighborhoods in Queens.



Clustering

k-means was run to cluster the neighborhood into clusters.



Clusters data with top Venues (sample)

k-means was run to cluster the neighborhood into clusters.

| | 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 | 11th Most Common Venue | 12th Most Common Venue | 13th Most Common Venue | 14th Most Common Venue | 15th Most Common Venue | 16th Most Common Venue | 17th Most Common Venue | 18th Most Common Venue | 19th Most Common Venue | 20th Most Common Venue | 21th Most Common Venue | 22th Most Common Venue | 23rd Most Common Venue |
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| 15 | Glendale | Food & Drink Shop | Brewery | Deli / Bodega | Arts & Crafts Store | Fast Food Restaurant | Empanada Restaurant | Event Space | Falafel Restaurant | Farm | Farmers Market | Filipino Restaurant | Egyptian Restaurant | Fish & Chips Shop | Fish Market | Flower Shop | Food | Electronics Store | Women's Store | Eastern European Restaurant | Food Court | Dry Cleaner | Donut Shop | Dog R |
| 19 | South Ozone Park | Deli / Bodega | Park | Hotel | Food Truck | Donut Shop | Fast Food Restaurant | Sandwich Place | Bar | Empanada Restaurant | Egyptian Restaurant | Electronics Store | Farm | Event Space | Falafel Restaurant | Farmers Market | Filipino Restaurant | Fish & Chips Shop | Fish Market | Eastern European Restaurant | Dry Cleaner | Dumpling Restaurant | Food | Dog R |
| 21 | Whitestone | Bubble Tea Shop | Dance Studio | Deli / Bodega | Train | Women's Store | Farm | Electronics Store | Empanada Restaurant | Event Space | Falafel Restaurant | Fast Food Restaurant | Farmers Market | Eastern European Restaurant | Filipino Restaurant | Fish & Chips Shop | Fish Market | Flower Shop | Egyptian Restaurant | Dry Cleaner | Dumpling Restaurant | Food & Drink Shop | Donut Shop | Dog R |
| 30 | Briarwood | Deli / Bodega | Convenience Store | Arts & Crafts Store | Bus Station | Fast Food Restaurant | Coffee Shop | Gym | Mexican Restaurant | Indian Restaurant | Empanada Restaurant | Food | Flower Shop | Fish Market | Fish & Chips Shop | Filipino Restaurant | Cycle Studio | Dance Studio | Farmers Market | Farm | Falafel Restaurant | Event Space | Dessert Shop | Dim Si Restauri |
| 42 | Broad Channel | Other Nightlife | Pizza Place | Deli / Bodega | Dive Bar | Bus Station | Farm | Electronics Store | Empanada Restaurant | Event Space | Falafel Restaurant | Farmers Market | Eastern European Restaurant | Fast Food Restaurant | Filipino Restaurant | Fish & Chips Shop | Fish Market | Flower Shop | Egyptian Restaurant | Women's Store | Dumpling Restaurant | Cosmetics Shop | Dry Cleaner | Dor Sh |
| 65 | Bellaire | Deli / Bodega | Convenience Store | Italian Restaurant | Moving Target | Bus Station | Bus Stop | Chinese Restaurant | Greek Restaurant | Coffee Shop | Grocery Store | Discount Store | Empanada Restaurant | Fish & Chips Shop | Cycle Studio | Filipino Restaurant | Fast Food Restaurant | Dance Studio | Department Store | Farmers Market | Farm | Falafel Restaurant | Event Space | Electron Str |

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| 63 | Somerville | Park | Women's Store | Dumpling Restaurant | Flower Shop | Fish Market | Fish & Chips Shop | Filipino Restaurant | Fast Food Restaurant | Farmers Market | Farm | Falafel Restaurant | Event Space | Empanada Restaurant | Electronics Store | Egyptian Restaurant | Eastern European Restaurant | Dry Cleaner | Food & Drink Shop | Donut Shop | Dog Run | Dive Bar | Discount Store | Diner | Dim Sun Restauran |

Clusters data with top Venues (sample)

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| 0 | Astoria | Bar | Middle Eastern Restaurant | Hookah Bar | Greek Restaurant | Seafood Restaurant | Bakery | Italian Restaurant | Mediterranean Restaurant | Salon / Barbershop | Café | Pub | Coffee Shop | Deli / Bodega | Pizza Place | Latin American Restaurant | Food Truck | Indian Restaurant | Ice Cream Shop | Gourmet Shop | Grocery Store | Gym | Food & Drink Shop | Gym / Fitness Center | Japanese Restaurant | Salad Place |
| 1 | Woodside | Grocery Store | Deli / Bodega | Bakery | Thai Restaurant | Latin American Restaurant | Filipino Restaurant | American Restaurant | Bar | Pizza Place | Donut Shop | Pub | Ice Cream Shop | Sandwich Place | Café | Restaurant | Mexican Restaurant | Chinese Restaurant | Gourmet Shop | Gym / Fitness Center | Pharmacy | Spa | Metro Station | Mobile Phone Shop | Empanada Restaurant | Coffee Shop |
| 2 | Jackson Heights | Latin American Restaurant | South American Restaurant | Peruvian Restaurant | Mobile Phone Shop | Bakery | Thai Restaurant | Spanish Restaurant | Mexican Restaurant | Pizza Place | Clothing Store | Diner | Empanada Restaurant | Supplement Shop | Grocery Store | Pharmacy | School | Cuban Restaurant | Kids Store | Laundromat | Shoe Store | Shipping Store | Bubble Tea Shop | Burger Joint | Cajun / Creole Restaurant | Lounge |
| 3 | Elmhurst | Thai Restaurant | Mexican Restaurant | Chinese Restaurant | Indonesian Restaurant | Bubble Tea Shop | Vietnamese Restaurant | South American Restaurant | Malay Restaurant | Sushi Restaurant | Donut Shop | Bar | Bank | Colombian Restaurant | Gym / Fitness Center | Snack Place | Ice Cream Shop | Hotpot Restaurant | Park | Argentinian Restaurant | Food | Pizza Place | Salon / Barbershop | Egyptian Restaurant | Farmers Market | Farm |
| 4 | Howard Beach | Italian Restaurant | Bagel Shop | Fast Food Restaurant | Pharmacy | Sandwich Place | Chinese Restaurant | Donut Shop | Tapas Restaurant | Diner | Sushi Restaurant | Supermarket | Cosmetics Shop | Fried Chicken Joint | Japanese Restaurant | Spa | Breakfast Spot | Mexican Restaurant | Seafood Restaurant | Sporting Goods Shop | Clothing Store | Bank | Deli / Bodega | Convenience Store | Construction & Landscaping | Gym / Fitness Center |
| 5 | Corona | Mexican Restaurant | Pizza Place | Italian Restaurant | Convenience Store | Food & Drink Shop | Empanada Restaurant | Supermarket | School | Sandwich Place | Donut Shop | Bakery | Restaurant | South American Restaurant | Park | Deli / Bodega | Ice Cream Shop | Diner | Dance Studio | Cosmetics Shop | Fast Food Restaurant | Creperie | Farmers Market | Cuban Restaurant | Farm | Falafel Restaurant |
| 6 | Forest Hills | Gym | Gym / Fitness Center | Pizza Place | Thai Restaurant | Park | Yoga Studio | Pharmacy | Convenience Store | Business Service | Sandwich Place | Liquor Store | Italian Restaurant | Snack Place | Peruvian Restaurant | Spa | Food Truck | Donut Shop | Chinese Restaurant | Supermarket | Supplement Shop | Farmers Market | Bakery | Bagel Shop | Gift Shop | Optical Shop |
| 7 | Kew Gardens | Chinese Restaurant | Park | Pharmacy | Pizza Place | Indian Restaurant | Donut Shop | Bank | Bar | Deli / Bodega | South American Restaurant | Food | Spa | Bubble Tea Shop | Pub | Juice Bar | Diner | Fish Market | Sandwich Place | Italian Restaurant | New American Restaurant | Movie Theater | Sushi Restaurant | Bakery | Trail | Wine Shop |
| 8 | Richmond Hill | Pizza Place | Lounge | Latin American Restaurant | Discount Store | Spanish Restaurant | Bus Station | Supermarket | Caribbean Restaurant | Sandwich Place | Bank | Donut Shop | Clothing Store | Metro Station | Diner | Gym / Fitness Center | Indian Restaurant | Pet Service | Empanada Restaurant | Filipino Restaurant | Fast Food Restaurant | Farmers Market | Cuban Restaurant | Cycle Studio | Farm | Falafel Restaurant |
| 9 | Flushing | Chinese Restaurant | Hotpot Restaurant | Spa | Bubble Tea Shop | Karaoke Bar | Korean Restaurant | Asian Restaurant | Bakery | Gym / Fitness Center | Gym | Construction & Landscaping | Supermarket | Food Truck | Pool Hall | Dumpling Restaurant | Church | Yoga Studio | Ramen Restaurant | Resort | Cantonese Restaurant | Malay Restaurant | Shipping Store | Shanghai Restaurant | Seafood Restaurant | Café |
| 10 | Long Island City | Hotel | Coffee Shop | Pizza Place | Bar | Café | Mexican Restaurant | Donut Shop | Gym | Deli / Bodega | Chinese Restaurant | Restaurant | Bus Station | Post Office | Sandwich Place | Steakhouse | Mobile Phone Shop | Spa | Bookstore | Food Truck | Residential Building (Apartment / Condo) | Fast Food Restaurant | Brewery | Cocktail Bar | Italian Restaurant | Climbing Gym |
| 11 | Sunnyside | Pizza Place | Italian Restaurant | South American Restaurant | Chinese Restaurant | Discount Store | Hotel | Coffee Shop | Bakery | Liquor Store | Seafood Restaurant | Laundromat | Spa | Fast Food Restaurant | Bus Station | Bus Stop | Restaurant | Mexican Restaurant | Romanian Restaurant | Korean Restaurant | Clothing Store | Pub | Diner | Deli / Bodega | Peruvian Restaurant | Latin American Restaurant |
| 12 | East Elmhurst | Donut Shop | School | Supermarket | Lake | Hotel Bar | South American Restaurant | Ice Cream Shop | Gas Station | Bus Station | Rental Car Location | Coffee Shop | Liquor Store | Electronics Store | Empanada Restaurant | Women's Store | Event Space | Egyptian Restaurant | Farm | Farmers Market | Fast Food Restaurant | Filipino Restaurant | Fish & Chips Shop | Falafel Restaurant | Dumpling Restaurant | Eastern European Restaurant |
| 13 | Maspeth | Pizza Place | Diner | Pharmacy | Mobile Phone Shop | Grocery Store | Bank | Japanese Restaurant | Sandwich Place | Sports Bar | Donut Shop | Sushi Restaurant | Chinese Restaurant | Taco Place | Discount Store | Bakery | Lounge | Gourmet Shop | Dessert Shop | Park | Pub | Ice Cream Shop | Deli / Bodega | Flower Shop | Eastern European Restaurant | Event Space |
| 14 | Ridgewood | Pizza Place | Bakery | Deli / Bodega | Grocery Store | Greek Restaurant | Mobile Phone Shop | Bank | Egyptian Restaurant | Eastern European Restaurant | Sandwich Place | Liquor Store | Italian Restaurant | Restaurant | Diner | Noodle House | Supplement Shop | Sushi Restaurant | Dessert Shop | Mexican Restaurant | Café | Convenience Store | Bar | German Restaurant | Polish Restaurant | Pet Store |
| 16 | Rego Park | Bakery | Grocery Store | Sandwich Place | Sushi Restaurant | Restaurant | Pizza Place | Pharmacy | Donut Shop | Plaza | Diner | Bubble Tea Shop | Shanghai Restaurant | Chinese Restaurant | Coffee Shop | Park | Discount Store | Spanish Restaurant | Nail Salon | Mediterranean Restaurant | Martial Arts Dojo | Liquor Store | Flower Shop | Kosher Restaurant | Furniture / Home Store | Japanese Restaurant |
| 17 | Woodhaven | Pharmacy | Deli / Bodega | Bank | Pizza Place | Dive Bar | Mexican Restaurant | Mobile Phone Shop | Spa | Fried Chicken Joint | Latin American Restaurant | Supermarket | Sandwich Place | Nail Salon | Donut Shop | Restaurant | Thai Restaurant | Japanese Restaurant | Bagel Shop | Hookah Bar | Park | Gift Shop | Cycle Studio | Falafel Restaurant | Event Space | Creperie |
| 18 | Ozone Park | Pharmacy | Diner | Gym | Bank | Pizza Place | Deli / Bodega | Sporting Goods Shop | Spanish Restaurant | Breakfast Spot | Fast Food Restaurant | Shop & Service | Mobile Phone Shop | Café | Department Store | Sandwich Place | Latin American Restaurant | Donut Shop | Dance Studio | Coffee Shop | Dessert Shop | Restaurant | Bowling Alley | Gym / Fitness Center | Train Station | Indian Restaurant |
| 20 | College Point | Chinese Restaurant | Asian Restaurant | Deli / Bodega | Latin American Restaurant | Bar | Pharmacy | Sandwich Place | Pizza Place | Donut Shop | Food & Drink Shop | Mexican Restaurant | Karaoke Bar | Spanish Restaurant | Supermarket | Steakhouse | Caribbean Restaurant | Bakery | Gift Shop | Nightclub | Diner | Buffet | Dessert Shop | Seafood Restaurant | Hotel Bar | Video Store |
| 22 | Bayside | Bar | Pizza Place | Spa | American Restaurant | Mexican Restaurant | Indian Restaurant | Italian Restaurant | Pub | Sushi Restaurant | Bakery | Donut Shop | Greek Restaurant | French Restaurant | Shipping Store | Gym | Shanghai Restaurant | Burger Joint | Sandwich Place | Salon / Barbershop | Bus Station | Café | Cajun / Creole Restaurant | Health & Beauty Service | Gymnastics Gym | Pharmacy |
| 23 | Auburndale | Italian Restaurant | Hookah Bar | Gymnastics Gym | Furniture / Home Store | Noodle House | Bar | Discount Store | Mobile Phone Shop | Toy / Game Store | Supermarket | Train | Athletics & Sports | Miscellaneous Shop | Ice Cream Shop | Fast Food Restaurant | Deli / Bodega | American Restaurant | Pet Store | Pharmacy | Korean Restaurant | Farmers Market | Farm | Falafel Restaurant | Filipino Restaurant | Event Space |

Clusters data with top Venues (sample)

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| 43 | Breezy Point | Beach | American Restaurant | Board Shop | Monument / Landmark | Trail | Women's Store | Farmers Market | Empanada Restaurant | Event Space | Falafel Restaurant | Farm | Filipino Restaurant | Fast Food Restaurant | Egyptian Restaurant | Fish & Chips Shop | Fish Market | Flower Shop | Food | Electronics Store | Eastern European Restaurant | Food Court | Dumpling Restaurant | Dry Cleaner | Diner |
| 78 | Hammels | Beach | Southern / Soul Food Restaurant | Diner | Café | Shoe Store | Gym / Fitness Center | Dog Run | Bus Stop | Bus Station | Fast Food Restaurant | Deli / Bodega | Food Truck | Farmers Market | Empanada Restaurant | Filipino Restaurant | Farm | Fish & Chips Shop | Falafel Restaurant | Fish Market | Event Space | Women's Store | Electronics Store | Flower Shop | Eastern European Restaurant |

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| 77 | Malba | Rest Area | Tennis Court | Flower Shop | Fish Market | Fish & Chips Shop | Filipino Restaurant | Fast Food Restaurant | Farmers Market | Dumpling Restaurant | Farm | Falafel Restaurant | Event Space | Empanada Restaurant | Electronics Store | Egyptian Restaurant | Eastern European Restaurant | Women's Store | Dry Cleaner | Food & Drink Shop | Donut Shop | Dog Run | Dive Bar | Discount Store | Diner |
| 79 | Bayswater | Tennis Court | Playground | Park | Falafel Restaurant | Eastern European Restaurant | Egyptian Restaurant | Electronics Store | Empanada Restaurant | Event Space | Women's Store | Dumpling Restaurant | Farmers Market | Fast Food Restaurant | Filipino Restaurant | Fish & Chips Shop | Fish Market | Farm | Donut Shop | Dry Cleaner | Food | Dog Run | Dive Bar | Discount Store | Diner |

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| 64 | Brookville | Deli / Bodega | Women's Store | Eastern European Restaurant | Food | Flower Shop | Fish Market | Fish & Chips Shop | Filipino Restaurant | Fast Food Restaurant | Farmers Market | Farm | Falafel Restaurant | Event Space | Empanada Restaurant | Electronics Store | Egyptian Restaurant | Dumpling Restaurant | Food Court | Dry Cleaner | Donut Shop | Dog Run | Dive Bar | Discount Store | Diner |



Conclusion

In this study, I analyzed the neighborhoods of Queens borough of NY and tried to understand what type of top venues there are and how they are clustered. This data helped to determine whether there is opportunity to open an Indian restaurant in Queens. The data gathered ed were eyeballed to determine the next steps. Further analysis to categorize venues, specific distances among them may predict whether to open an Indian restaurant. Regression analysis maybe performed as well.

Above analysis should have shown a good number of Indian restaurants in top 25 venues and 10 clusters. But that does not seem to be case. The cluster data and top venues indicate that there is definitely an opportunity to open up an Indian restaurant in Queens borough. There are enough venues around which can also increase the foot traffic to the Indian restaurant.