The Battle of the Neighborhoods

Finding the beast area in Queens, NY to open an Asian restaurant
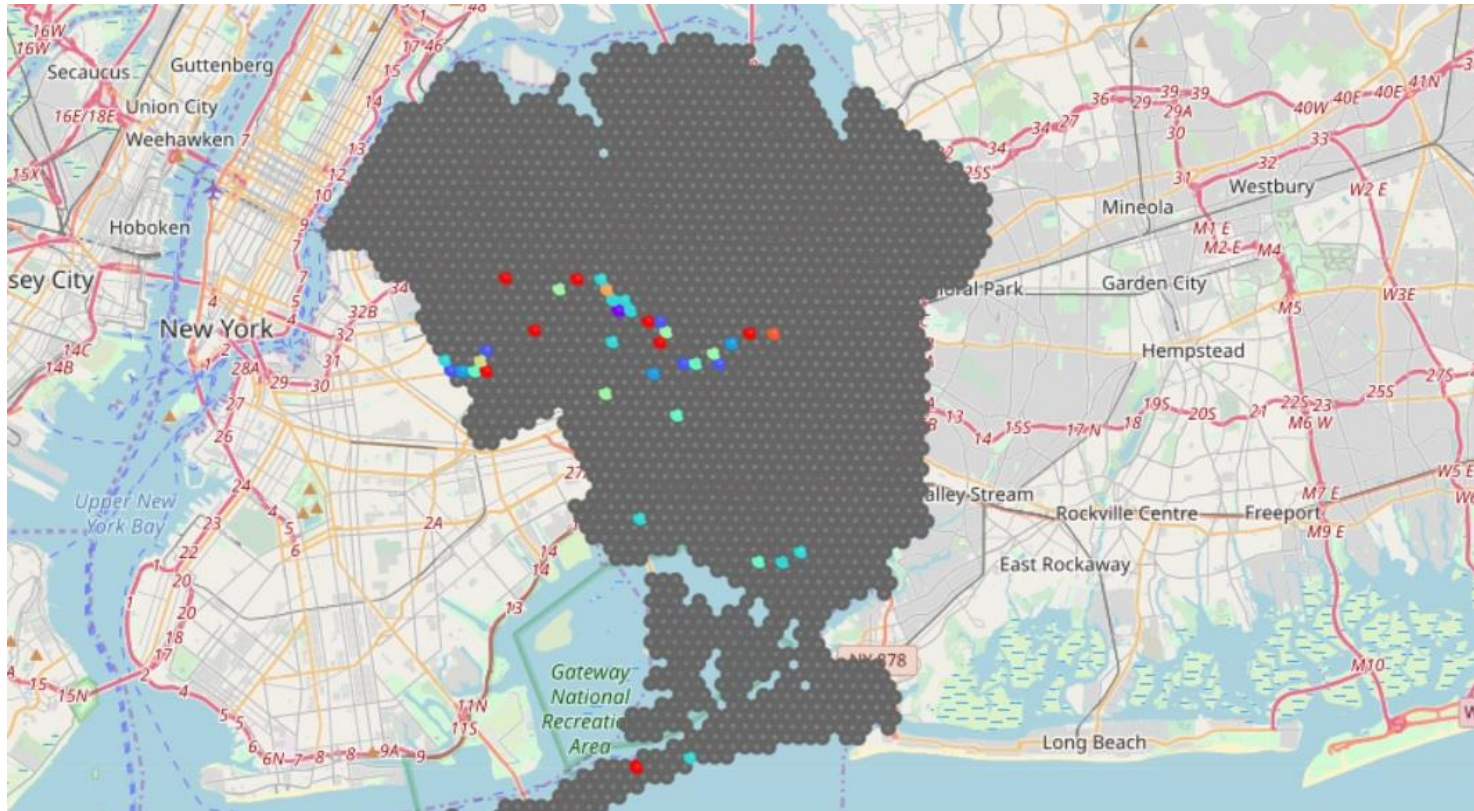
Author: Abeera Ilyas

Introduction: Business Problem

- The objective is to help an entrepreneur to find the best place to open a new gastronomic Asian restaurant in Queens, NY.

- Approach:
  1. Find zones with a certain density of restaurants
  2. Segment those zones in order to find different profiles (e.g. Asian/Chinese profile, Latin/Italian profile, TexMex...)
  3. Within each profile/segment, assess the potential of each zone (e.g. a zone being tagged as Chinese/Japanese with fewer Chinese restaurant than average)

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Data Collection

- Get coordinates and frontiers of Queens: create a grid over Queens area in order to define zones of the same size

- Get all restaurants of Queens using Foursquare API

- Keep the 20 zones with the best potential for further analysis

- Retrieve competitor rating in the chosen zones using Foursquare API

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Segment zones

- Segment zones having the same restaurant density profiles
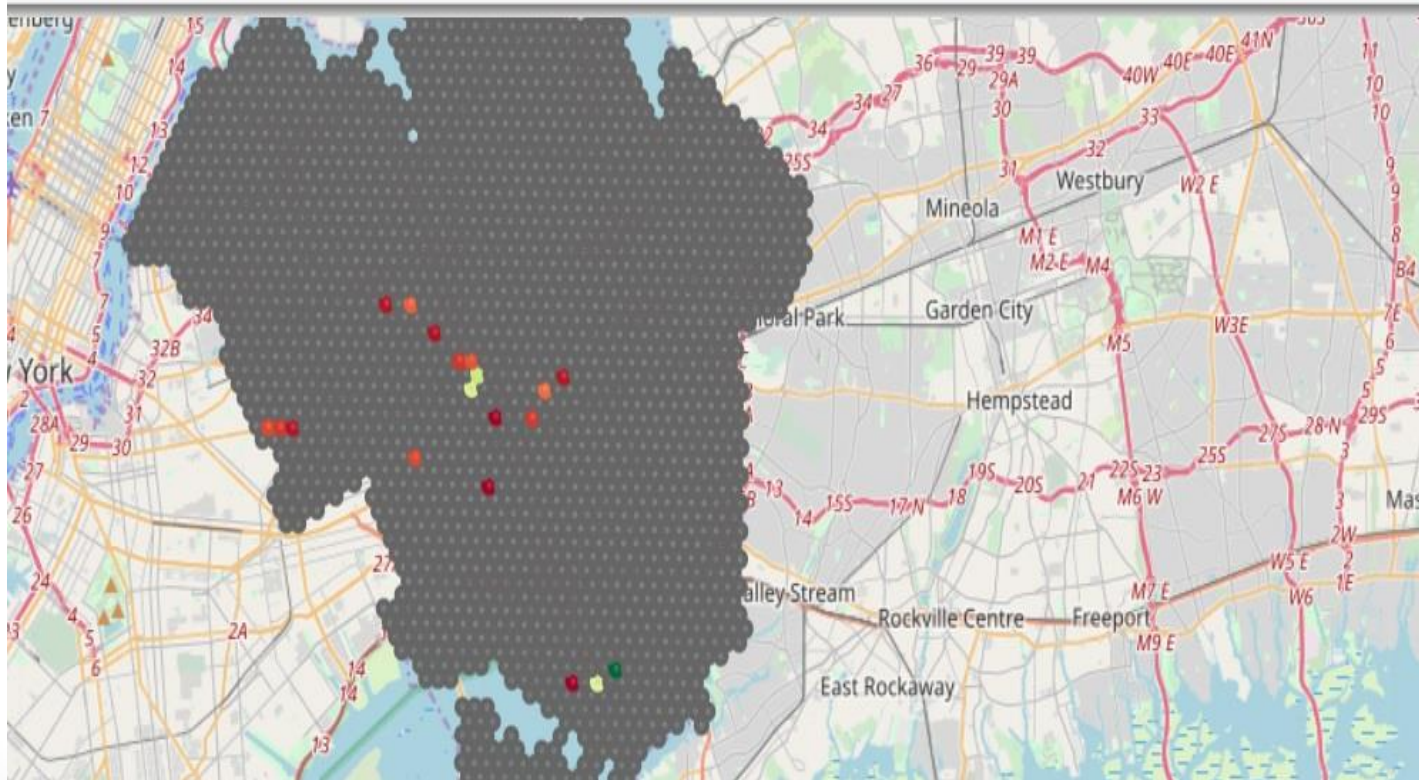

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Calculate zone potential

▼ Get the potential of each node/zone by calculating the distance between the density of the zone ('New Restaurant Type') and the one of the cluster

Node	Longitude	Latitude	Cluster Labels	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
422	-73.77414	40.64608	4.00000	Burger Joint	Pizza Place	Breakfast Spot	Italian Restaurant	Sandwich Place	American Restaurant	Steakhouse	Snack Place	Bakery	Sushi Restaurant
1128	-73.82739	40.71216	6.00000	South American Restaurant	Deli / Bodega	Fast Food Restaurant	Spanish Restaurant	Thai Restaurant	Sandwich Place	Donut Shop	Mexican Restaurant	Mediterranean Restaurant	Pizza Place
1085	-73.82981	40.70907	0.00000	Pizza Place	Chinese Restaurant	American Restaurant	Food Truck	Donut Shop	Café	Diner	Deli / Bodega	Bakery	Bagel Shop
398	-73.78129	40.64303	4.00000	American Restaurant	Donut Shop	Bakery	Sandwich Place	Mexican Restaurant	Burger Joint	Burrito Place	Café	Chinese Restaurant	Diner
107	-73.81781	40.58412	4.00000	Fast Food Restaurant	Pizza Place	Food Truck	BBQ Joint	Bagel Shop	Seafood Restaurant	Latin American Restaurant	Burrito Place	Poke Place	Colombian Restaurant
1091	-73.80140	40.70877	3.00000	Latin American Restaurant	Sri Lankan Restaurant	Chinese Restaurant	Caribbean Restaurant	Donut Shop	Middle Eastern Restaurant	South American Restaurant	Southern / Soul Food Restaurant	Pizza Place	Fried Chicken Joint
1338	-73.85316	40.72802	4.00000	Chinese Restaurant	Mediterranean Restaurant	Pizza Place	Bagel Shop	Restaurant	Sandwich Place	Middle Eastern Restaurant	Snack Place	Shanghai Restaurant	Peruvian Restaurant
1170	-73.82970	40.71531	2.00000	Food Truck	Mediterranean Restaurant	South American Restaurant	Deli / Bodega	Pizza Place	Asian Restaurant	Chinese Restaurant	Sandwich Place	Fried Chicken Joint	Bagel Shop
877	-73.85138	40.69368	6.00000	Deli / Bodega	Pizza Place	Latin American Restaurant	Empanada Restaurant	Chinese Restaurant	Diner	Donut Shop	Sandwich Place	South American Restaurant	Spanish Restaurant

Zones with potential

- Zones with potential have been identified
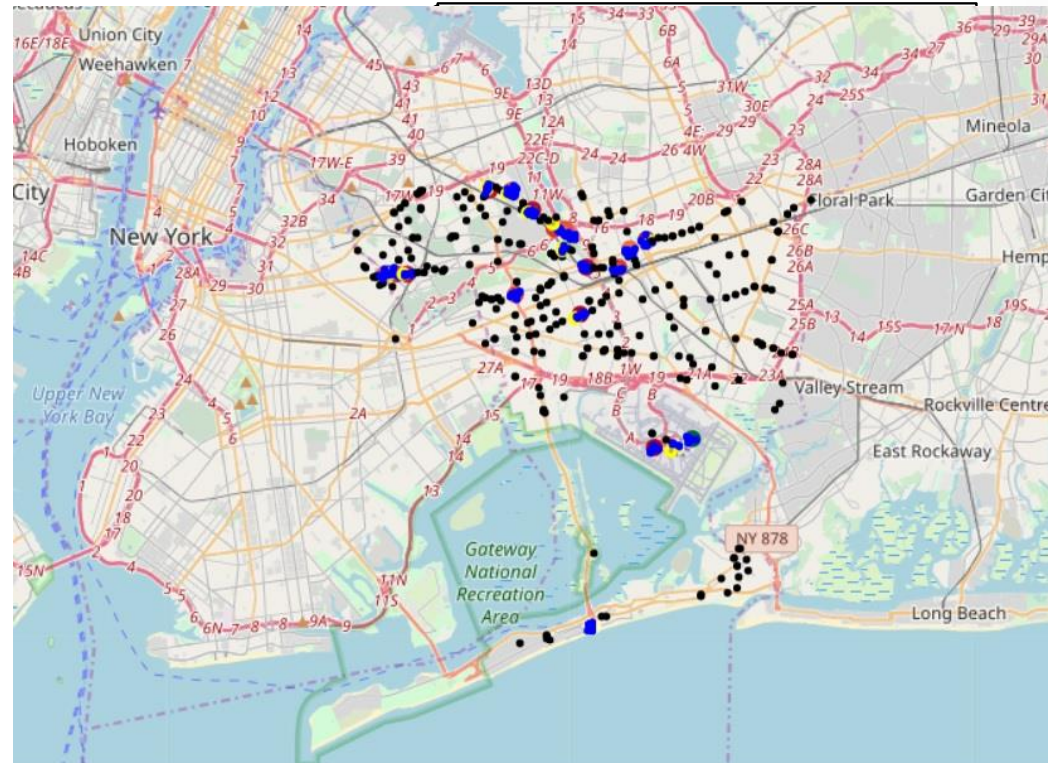
High potential

Low potential

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Competitors rating

- Competitors rating of the top 20 zones

	Node	Node Latitude	Node Longitude	Venue ID	Venue	Venue Latitude	Venue Longitude	Venue Category	Node Number Venues	Rating
321	398	40.64303	-73.78129	4bc39a9874a9a5939fcbd4f6	Panda Express	40.64205	-73.78316	Chinese Restaurant	29	4.90000
1026	769	40.68406	-73.82551	4bb50d3446d4a593807bc4c0	Chopsticks	40.68599	-73.82517	Chinese Restaurant	5	7.50000
1098	807	40.68715	-73.82309	4bb50d3446d4a593807bc4c0	Chopsticks	40.68599	-73.82517	Chinese Restaurant	14	7.50000
1529	945	40.70047	-73.90808	4c703259d97fa1434b58f5ca	Randy's Restaurant	40.70026	-73.90660	Chinese Restaurant	14	7.10000
1555	947	40.70038	-73.89861	4ba25cdff964a52051f137e3	Mr Chen	40.70052	-73.89994	Chinese Restaurant	16	7.30000

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Final map

- Top 20 zones with highest potential are display, with a color based on their potential. Green is the highest potential

- In the top 20 zones

  - Competitors with a good rating (>= 8) are displayed with a red marker

  - Competitors with a low rating (< 8) are displayed with a yellow marker

  - Non-asian restaurants are displayed in blue
    It shows that zones are not in a no restaurant zone

- All the Asian restaurants of queens (in black).

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Conclusion

- This study has given a list of 20 interesting zones for a deeper analysis.
- Best location can be chosen depending on the preferred neighborhoods and the distance from other competitors
- Additional criteria should be needed before taking the final decision, such as:
  - attractiveness of each location
  - levels of noise / proximity to major roads
  - real estate availability
  - prices
  - social and economic dynamics of every neighborhood etc.

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