



# Capstone Project: The Battle of the Neighborhoods

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NOVEMBER 18, 2020

# Background

- Where in New York City Should I open my Bubble Tea Business?
  - New York City: 5 Boroughs and 306 Neighborhoods
  - Bubble Tea: Tea-Based Drink Extremely Popular Among Asian-Americans
  - Explore Neighborhoods, Build Up Unsupervised Machine Learning Classifier Model, Study Neighborhoods' Differences, Identify Candidate Neighborhood

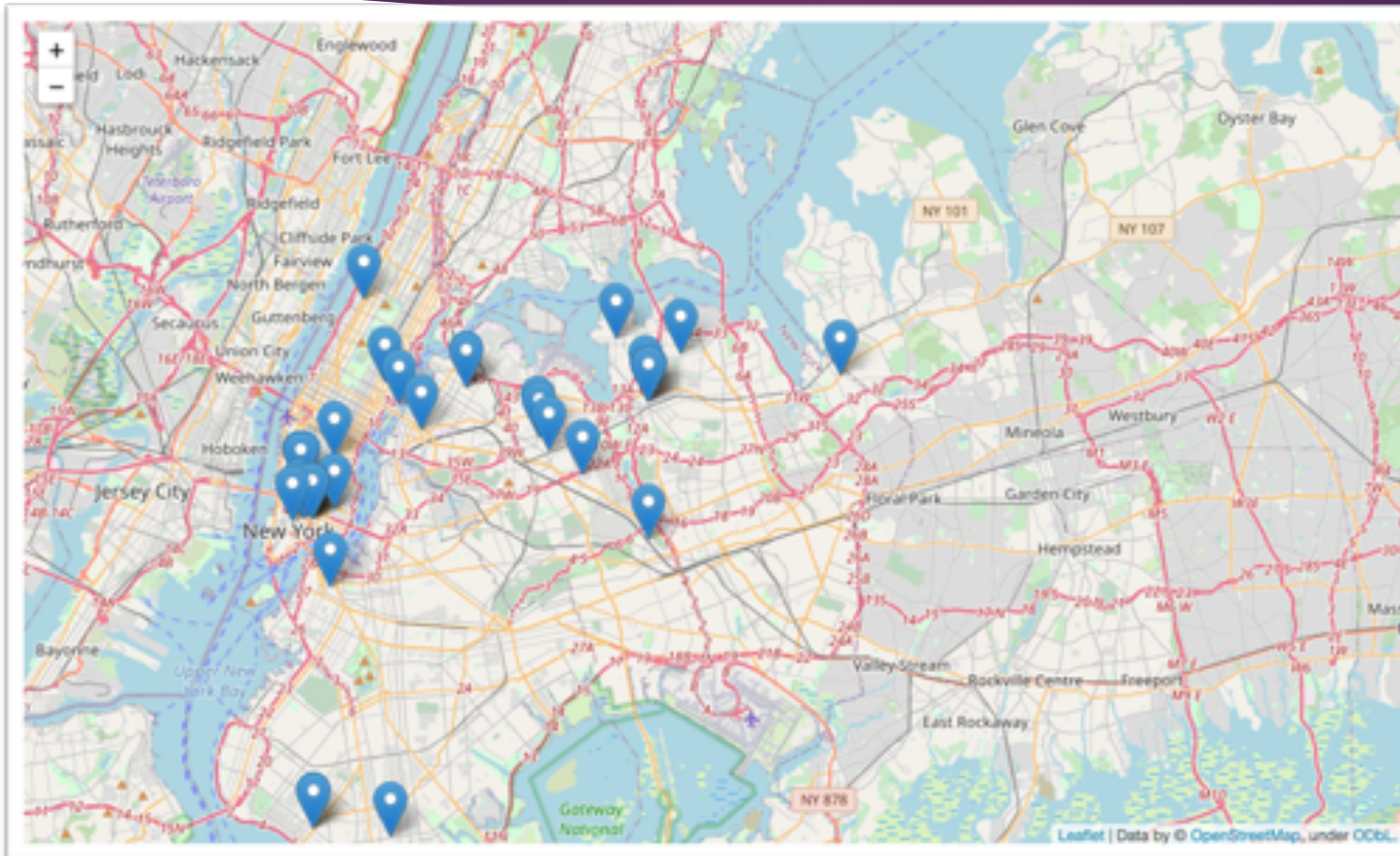
# Data

- New York City Neighborhood Coordinate

[https://geo.nyu.edu/catalog/nyu\\_2451\\_34572](https://geo.nyu.edu/catalog/nyu_2451_34572)

- Foursquare API: request venue info

# Where are Bubble Tea Shops in NY?



## 2 Popular Clusters:

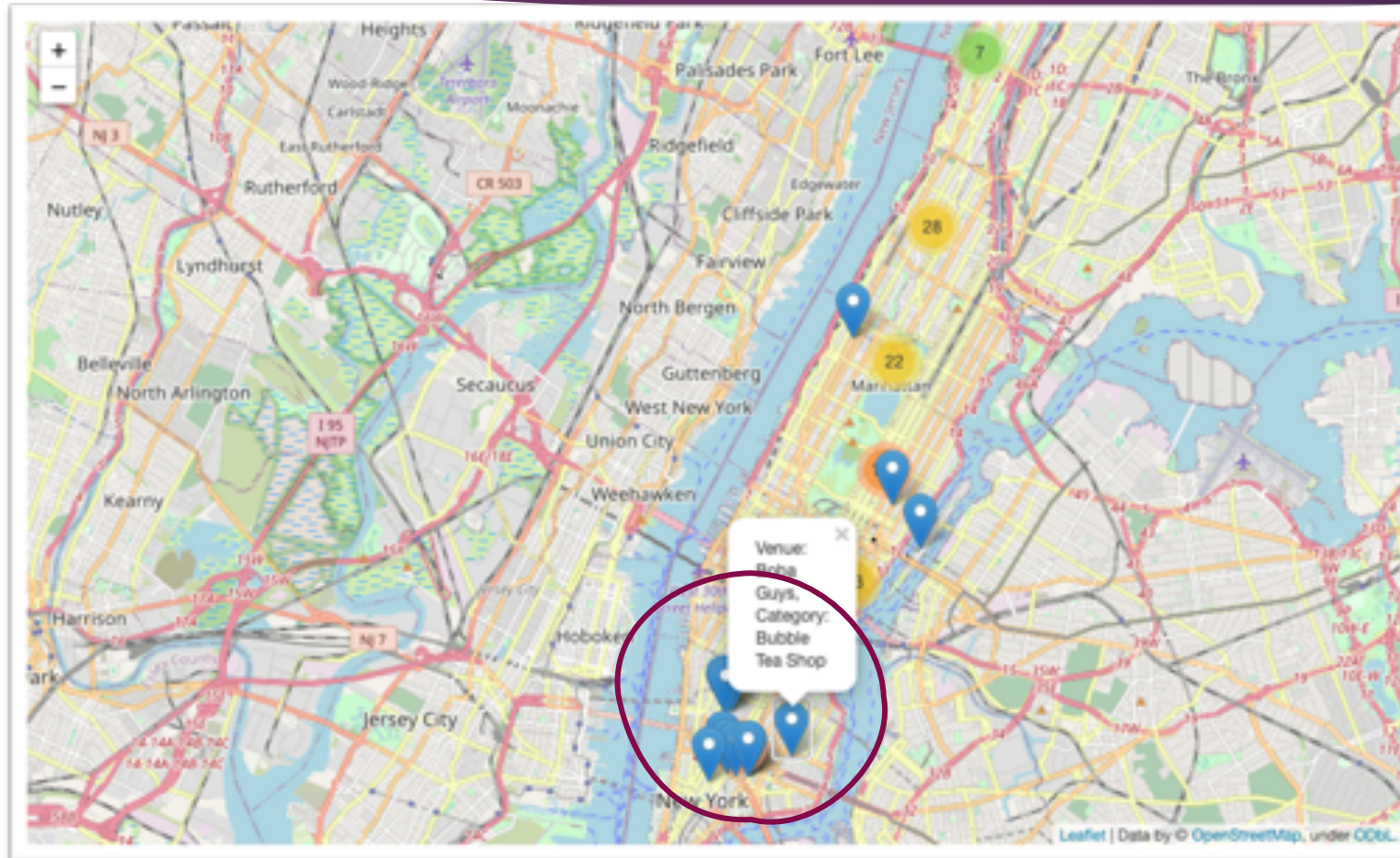
- Manhattan
- Queens

# What is Popular in Manhattan?

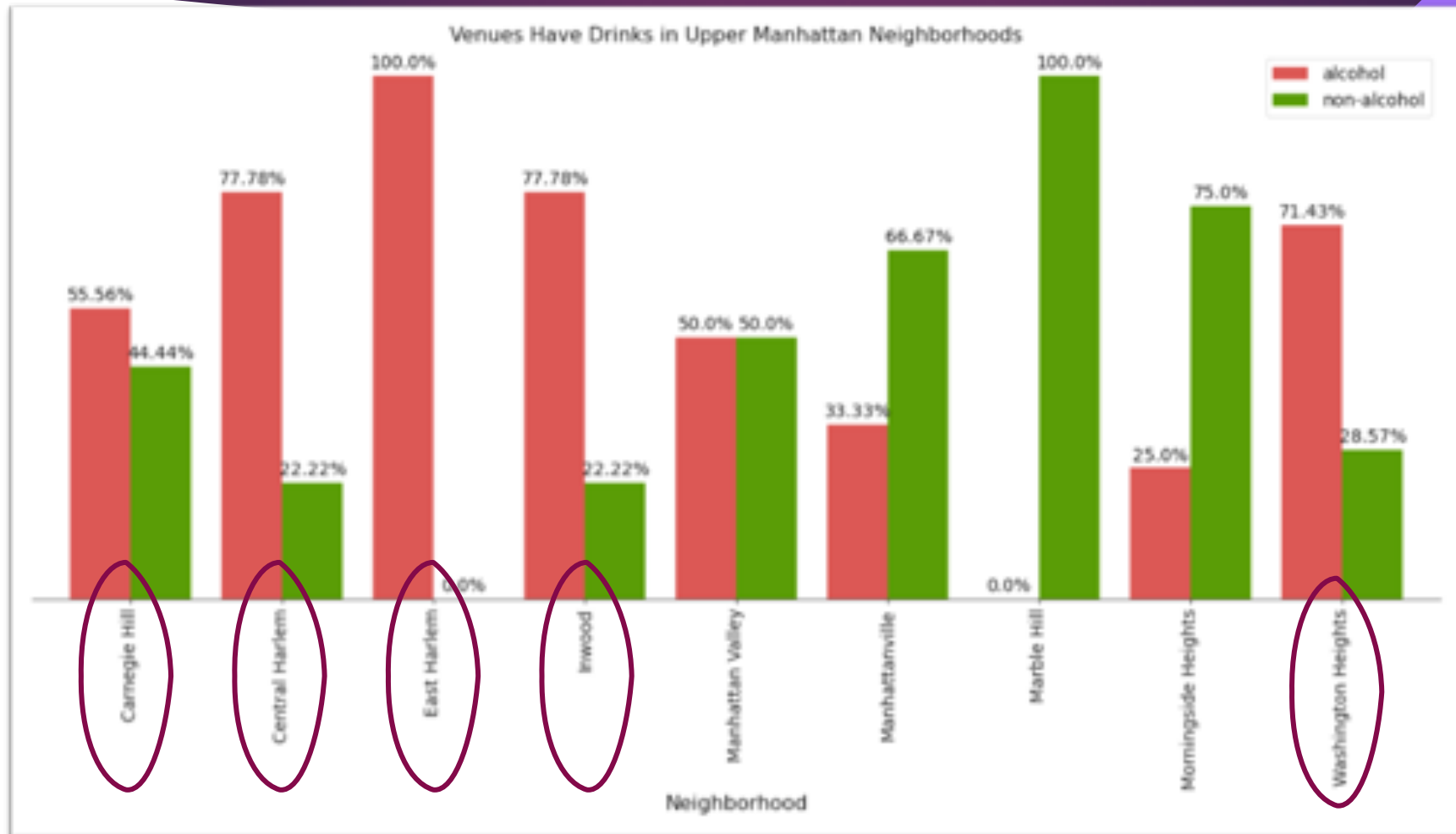
Venue Category	Count
Coffee Shop	145
Italian Restaurant	130
Café	83
Bakery	76
Pizza Place	76
American Restaurant	75
Park	68
Bar	62
Hotel	62
Gym	58



# Where are Bubble Tea Shops in Manhattan?



# What is in Upper Manhattan Neighborhoods?



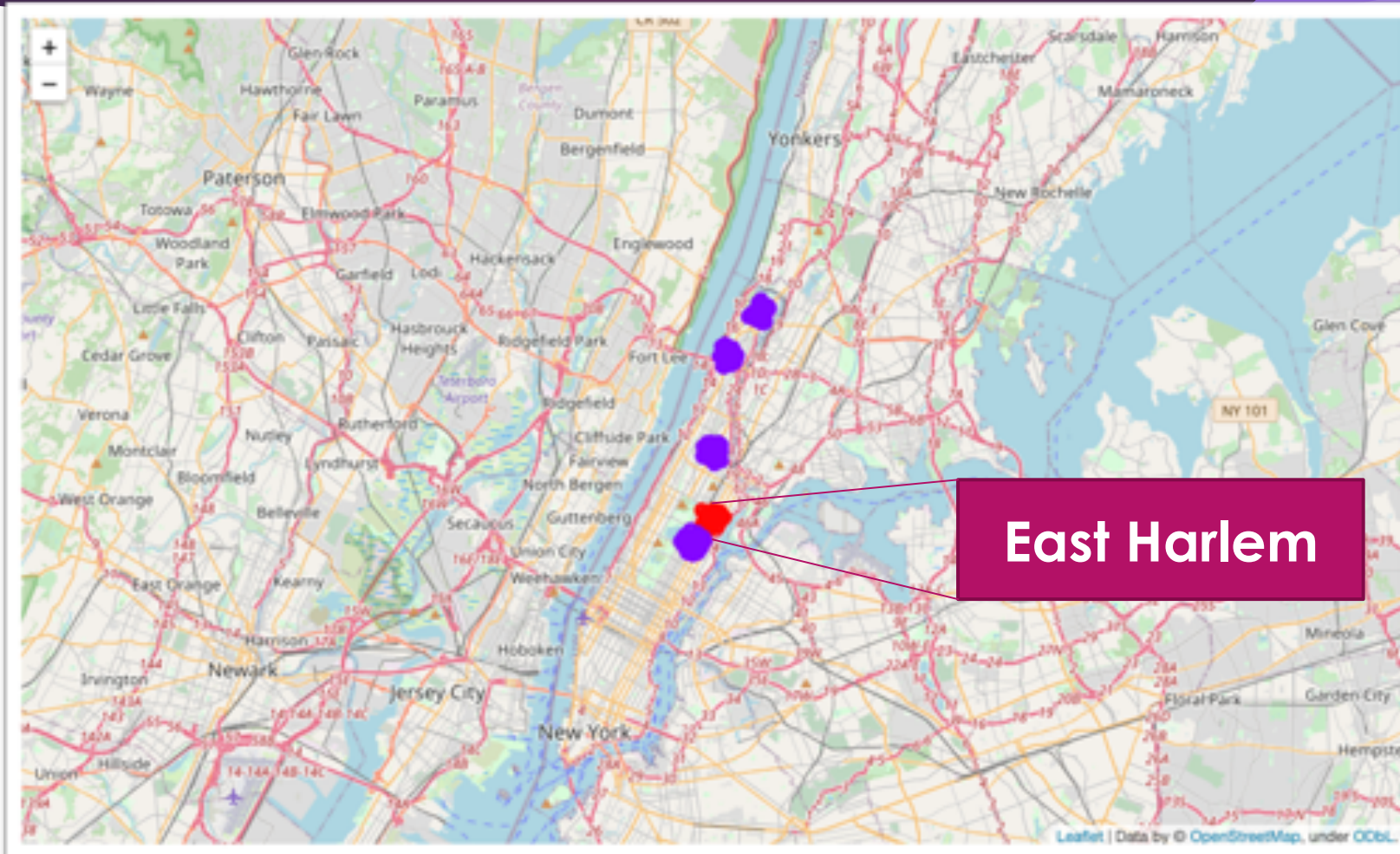
Candidate  
Neighborhoods  
in Upper  
Manhattan

# What are the Most Common Venues in Upper Manhattan Neighborhoods?

Neighborhood	X Most Common Venue									
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>	8 <sup>th</sup>	9 <sup>th</sup>	10 <sup>th</sup>
Carnegie Hill	Coffee Shop	Café	Yoga Studio	Bookstore	French Restaurant	Gym	Gym/ Fitness Center	Italian Restaurant	Wine Shop	Bar
Central Harlem	African Restaurant	Seafood Restaurant	French Restaurant	Chinese Restaurant	Bar	Cosmetics Shop	American Restaurant	Park	Dessert Shop	Cycle Studio
East Harlem	Mexican Restaurant	Bakery	Thai Restaurant	Deli / Bodega	Sandwich Place	Latin America Restaurant	Cuban Restaurant	Cocktail Bar	Pharmacy	Spa
Inwood	Mexican Restaurant	Lounge	Café	Restaurant	Frozen Yogurt Shop	Chinese Restaurant	Park	Wine Bar	Deli / Bodega	Caribbean Restaurant
Washington Heights	Café	Bakery	Grocery Store	Deli / Bodega	Spanish Restaurant	Italian Restaurant	Chinese Restaurant	Latin America Restaurant	Mobile Phone Shop	New American Restaurant



# Winner of the Battle?



# How East Harlem Different from the Rest?

Cluster	Neighborhood	X Most Common Venue				
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>
0	East Harlem	Mexican Restaurant	Bakery	Thai Restaurant	Deli / Bodega	Sandwich Place
1	Central Harlem	African Restaurant	Seafood Restaurant	French Restaurant	Chinese Restaurant	Bar
	Carnegie Hill	Coffee Shop	Café	Yoga Studio	Bookstore	French Restaurant
	Inwood	Mexican Restaurant	Lounge	Café	Restaurant	Frozen Yogurt Shop
	Washington Heights	Café	Bakery	Grocery Store	Deli / Bodega	Spanish Restaurant

No Drink Venue

# Business Decision

- Mobile Bubble Tea Truck in East Harlem, Manhattan, New York City
  - Mobile / Truck: Reach more population
  - Drink Type:
    - Classic Boba
    - Fusion Boba: Agua Fresca Boba – Better Serve Hispanic Community