

The background features abstract, overlapping green geometric shapes, primarily triangles and polygons, in various shades of green, creating a modern and dynamic visual effect.

# **Coursera Capstone Project**

## **The Battle of the Neighborhoods**

**André Olbrich**  
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# Introduction

- New York has more than 26.000 restaurants
- There is a high demand but also a huge competition
- In which kind of restaurant to invest can be a tough decision
- In this analysis I will show as a case study for a specific part of New York, the Bronx, the best kind of restaurant to invest in the matter of location.

# Business Problem

- Imagine you are a bank and you have to decide where to invest the money
- You have to decide how risky the investment is and if the concept of the customer is convincing
- One big factor to decide if it is worth to invest in a restaurant is to look where the restaurant will be located
- Is it a promising place? Will there be a lot of competition?

# Data

- Data about the New York neighborhood will be the key to explore, segment and cluster the location regarding the best location for a restaurant
- After that I need to access the location information provider foursquare.com to explore the various types restaurant venues in the bronx
- K-Clustering methods are used

## 256 Restaurants can be found in the Bronx

(256, 6)

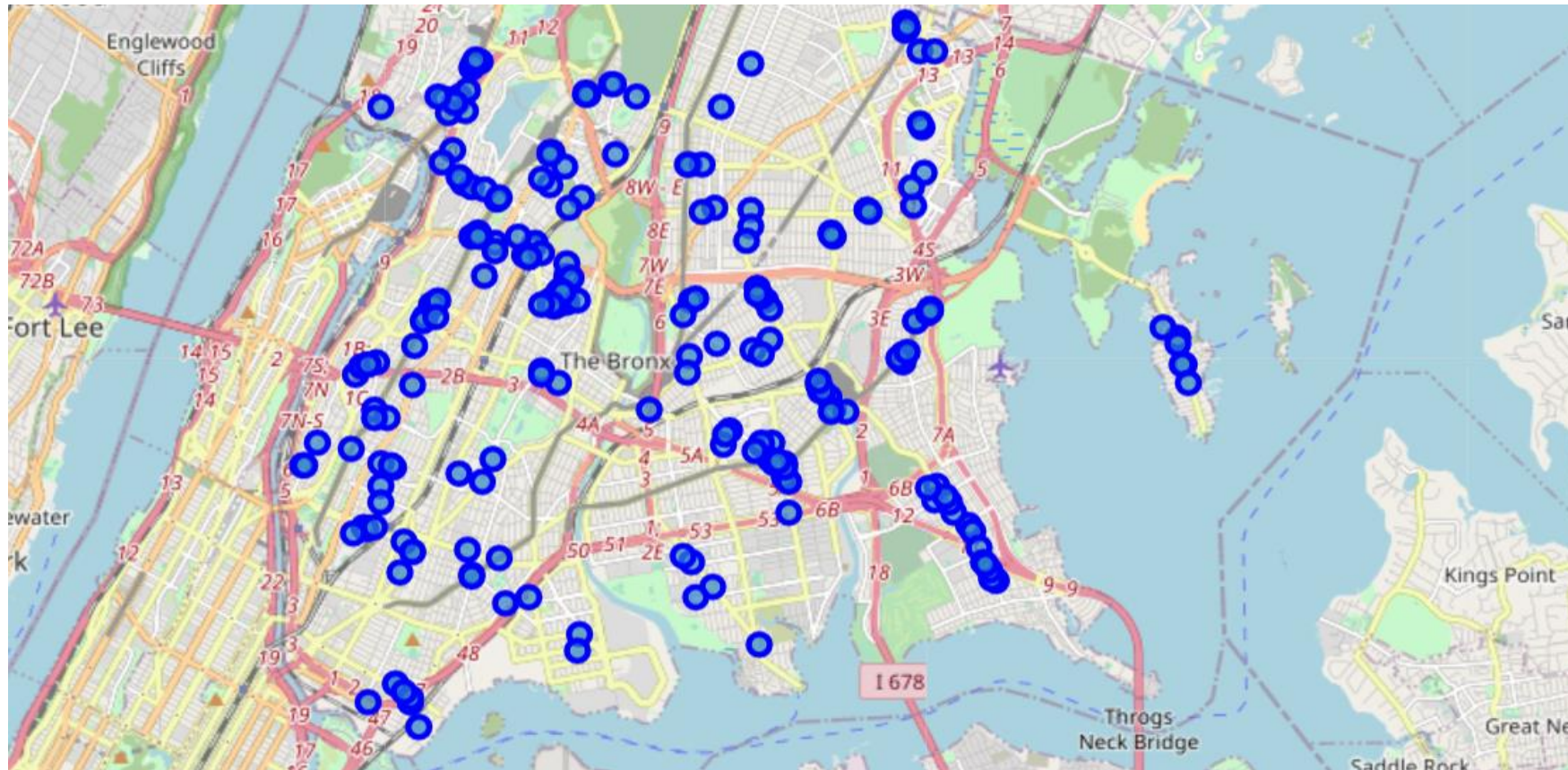
	index	Neighborhood		Venue	Venue Latitude	Venue Longitude	Category
<b>0</b>	16	Co-op City		Arby's	40.870411	-73.828606	Fast Food Restaurant
<b>1</b>	17	Co-op City	Townhouse Restaurant		40.876086	-73.828868	Restaurant
<b>2</b>	20	Co-op City	Guang Hui Chinese Restaurant		40.876651	-73.829092	Chinese Restaurant
<b>3</b>	24	Eastchester	Fish & Ting		40.885656	-73.829197	Caribbean Restaurant
<b>4</b>	28	Eastchester	Dyre Fish Market		40.889318	-73.831453	Seafood Restaurant
<b>...</b>	...	...	...	...	...	...	...
<b>251</b>	1202	Kingsbridge Heights		La Catrina	40.869960	-73.903956	Mexican Restaurant
<b>252</b>	1206	Kingsbridge Heights	New No. 1 Chinese Restaurnt		40.868266	-73.899965	Chinese Restaurant
<b>253</b>	1211	Kingsbridge Heights	New Yung Hong Chinese Restaurant		40.873272	-73.905128	Chinese Restaurant
<b>254</b>	1212	Kingsbridge Heights	Caridad Spanish Restaurant		40.871832	-73.906700	Spanish Restaurant
<b>255</b>	1213	Kingsbridge Heights		King's Farm	40.867376	-73.897498	Restaurant

## 30 different kinds of Restaurants can be found in the Bronx

### Italian and Chinese Restaurants are very frequent

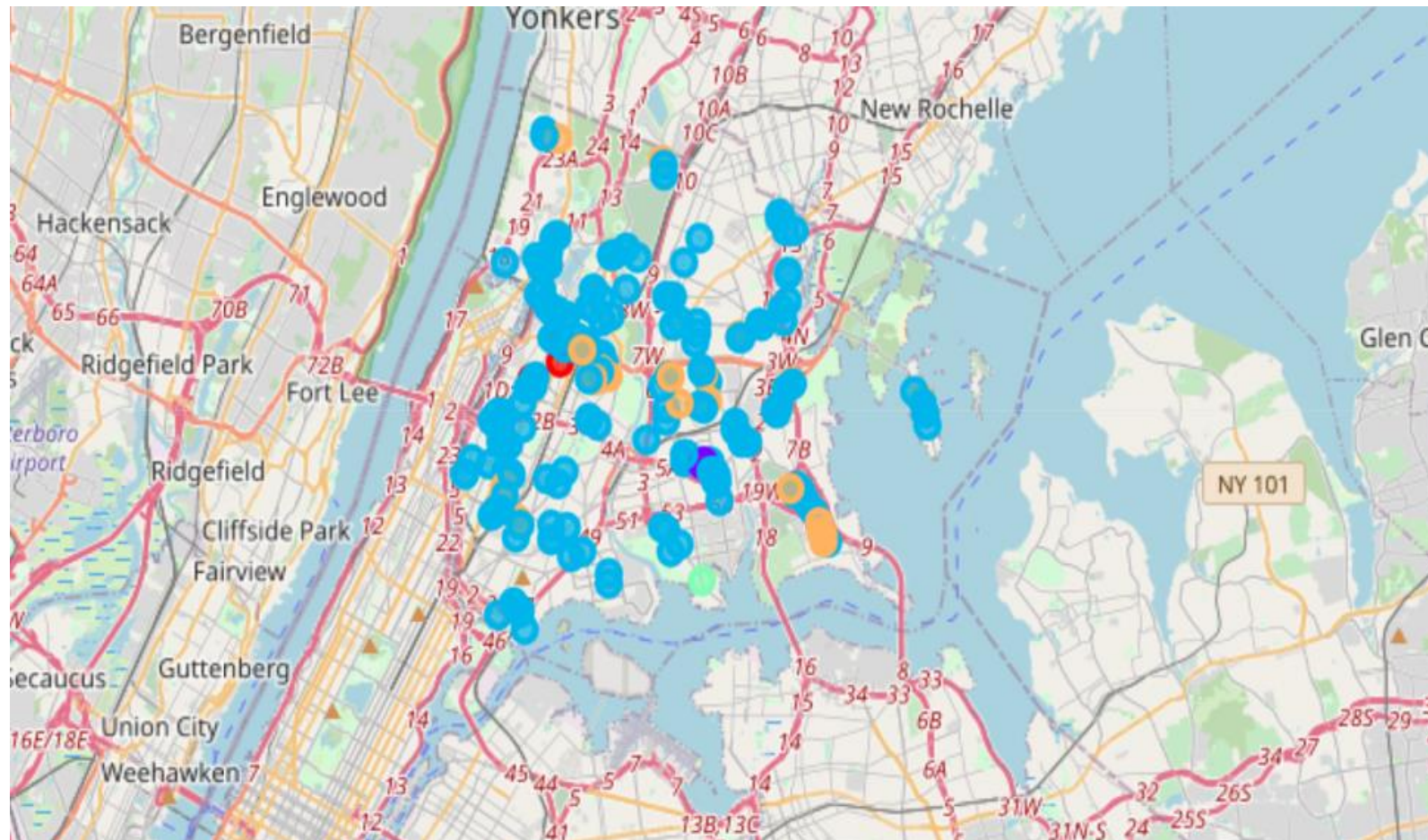
Chinese Restaurant	41
Italian Restaurant	40
Fast Food Restaurant	28
Spanish Restaurant	28
Mexican Restaurant	25
Latin American Restaurant	20
Caribbean Restaurant	14
American Restaurant	13
Asian Restaurant	7
Restaurant	7
Seafood Restaurant	6
Indian Restaurant	3
Peruvian Restaurant	2
African Restaurant	2
Eastern European Restaurant	2
Sushi Restaurant	2
Japanese Restaurant	2
Thai Restaurant	2
Southern / Soul Food Restaurant	1
Vietnamese Restaurant	1
South Indian Restaurant	1

## Location of Restaurants in the Bronx





## Colour Clustered Restaurants





# Results

- 256 Restaurants could be found
- 30 different kinds of Restaurants are existing
- Most frequent are Chinese and Italian Restaurants.

# Discussion

- The extraction of the Restaurant data for the Bronx could give us a clear inside in how many restaurants are present in the Bronx, which kind of Restaurants are there and how many of them are around
- With a cluster of these different restaurants we could see where there is a possible niche
- Together with a demand analysis, this location survey could give us very valuable information about the question where to invest in a new restaurant in the Bronx and which of the possible customers of our bank can be served with less risk.

# Conclusion

- I would especially recommend to focus on niche restaurants which don't have a high concentration in main areas of the Bronx.

**Thank you for your attention!**