

# Capstone Project

Neighborhood battle  
in London, United  
Kingdom

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# Introduction.

- London is a diverse city with many nationalities.
- This project aims to identify the best neighborhood to open a Lithuanian grocery store

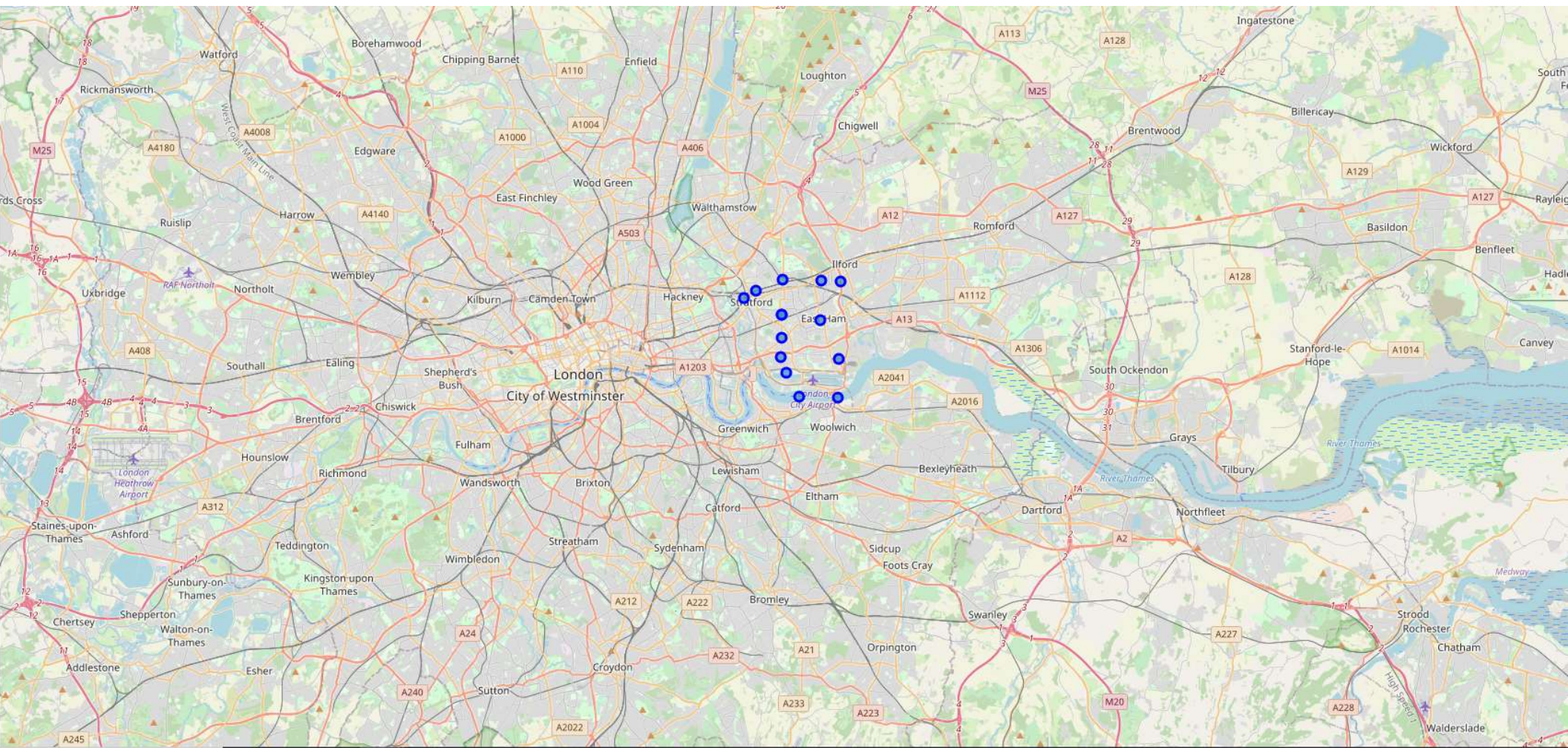
# Data

→ Scraped wikipedia page

→ Foursquare API information

## Methodology

In order to identify the best neighborhood for Lithuanian store – unsupervised machine learning algorithm was used - k-means





# Clustering

	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
0	Beckton	Hotel	Furniture / Home Store	Gym / Fitness Center	Discount Store	Clothing Store	Pub	Shopping Plaza	Light Rail Station	Grocery Store	Frozen Yogurt Shop
2	Custom House	Hotel	Chinese Restaurant	Coffee Shop	Gym	Pub	Restaurant	Bakery	Bridge	Café	Convenience Store
3	East Ham	Pub	Clothing Store	Bookstore	Electronics Store	Sandwich Place	Coffee Shop	Supermarket	Fast Food Restaurant	Grocery Store	Park
4	Forest Gate	Grocery Store	Fast Food Restaurant	Train Station	Bakery	Pub	Café	Fish & Chips Shop	Wine Bar	Dessert Shop	Discount Store
7	Maryland	Hotel	Pub	Café	Indian Restaurant	Sculpture Garden	Moving Target	Liquor Store	General Entertainment	Chinese Restaurant	Eastern European Restaurant
8	North Woolwich	Pier	Hotel	Clothing Store	Sculpture Garden	Pharmacy	Plaza	Italian Restaurant	Pub	River	Fountain
9	Plaistow	Grocery Store	Bus Stop	Café	African Restaurant	Park	Indian Restaurant	Gym / Fitness Center	Pub	Business Service	Doner Restaurant
11	Stratford	Pub	Clothing Store	Café	Ice Cream Shop	Pizza Place	Juice Bar	Department Store	Cosmetics Shop	Sandwich Place	Coffee Shop

Newham\_merged.loc[Newham\_merged['Cluster Labels'] == 1, Newham\_merged.columns[[1] + list(range(5, Newham\_merged.shape[1]))]]

	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
12	Upton Park	Convenience Store	Bus Stop	Bookstore	Boutique	Wine Bar	Doner Restaurant	Donut Shop	Eastern European Restaurant	Electronics Store	English Restaurant
13	West Ham	Convenience Store	Bus Stop	Bookstore	Boutique	Wine Bar	Doner Restaurant	Donut Shop	Eastern European Restaurant	Electronics Store	English Restaurant

Newham\_merged.loc[Newham\_merged['Cluster Labels'] == 2, Newham\_merged.columns[[1] + list(range(5, Newham\_merged.shape[1]))]]

	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
5	Little Ilford	Grocery Store	Ice Cream Shop	Indian Restaurant	Fried Chicken Joint	Wine Bar	Fish & Chips Shop	Dessert Shop	Discount Store	Doner Restaurant	Donut Shop

Newham\_merged.loc[Newham\_merged['Cluster Labels'] == 3, Newham\_merged.columns[[1] + list(range(5, Newham\_merged.shape[1]))]]

	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
6	Manor Park	Gym / Fitness Center	Turkish Restaurant	Asian Restaurant	Gas Station	Restaurant	Wine Bar	Fast Food Restaurant	Dessert Shop	Discount Store	Doner Restaurant

Newham\_merged.loc[Newham\_merged['Cluster Labels'] == 4, Newham\_merged.columns[[1] + list(range(5, Newham\_merged.shape[1]))]]

	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
1	Canning Town	Park	Convenience Store	Gas Station	Café	Fish & Chips Shop	Dessert Shop	Discount Store	Doner Restaurant	Donut Shop	Eastern European Restaurant
10	Silvertown	Gym / Fitness Center	Theater	Museum	Construction & Landscaping	Café	Paintball Field	Park	Go Kart Track	Gas Station	Furniture / Home Store

# Best locations for the Lithuanian store:

- Forest Gate

- Plaistow

- Upton Park

- West Ham

- Little Ilford



Using this approach and analysis the future shop owner could decide what is the best location for his specialty shop.

**Thank you!**