

# Coursera Capstone Project

**NEW CINEPLEX IN LONDON, UNITED KINGDOM**

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August 2019

# Business Problem

- ▶ Location of Cineplex is one of the main factor to be considered while building a new Movie Theatre in the city. This factor contributes to the success of a new Cineplex.
- ▶ Objective: To select the best locations in the City of London to open up a new Cineplex.
- ▶ This project helps the property developers or stakeholders looking to open a New Cineplex in the city.
- ▶ Business Question:  
In the city of London, United Kingdom if a stakeholder or property developer is looking to open a new Cineplex, where would you recommend they open it?

# Data

## ▶ Data Required

- ▶ List of neighborhoods in the city of London
- ▶ Latitude and Longitude coordinates of the neighborhoods
- ▶ Venue data, particularly data related to Movie Theatres

## ▶ Sources of Data

- ▶ Wikipedia page for list of neighborhoods  
([https://en.wikipedia.org/wiki/List\\_of\\_areas\\_of\\_London](https://en.wikipedia.org/wiki/List_of_areas_of_London))
- ▶ Geocoder package for latitude and longitude coordinates
- ▶ Foursquare API for venue data

# Methodology

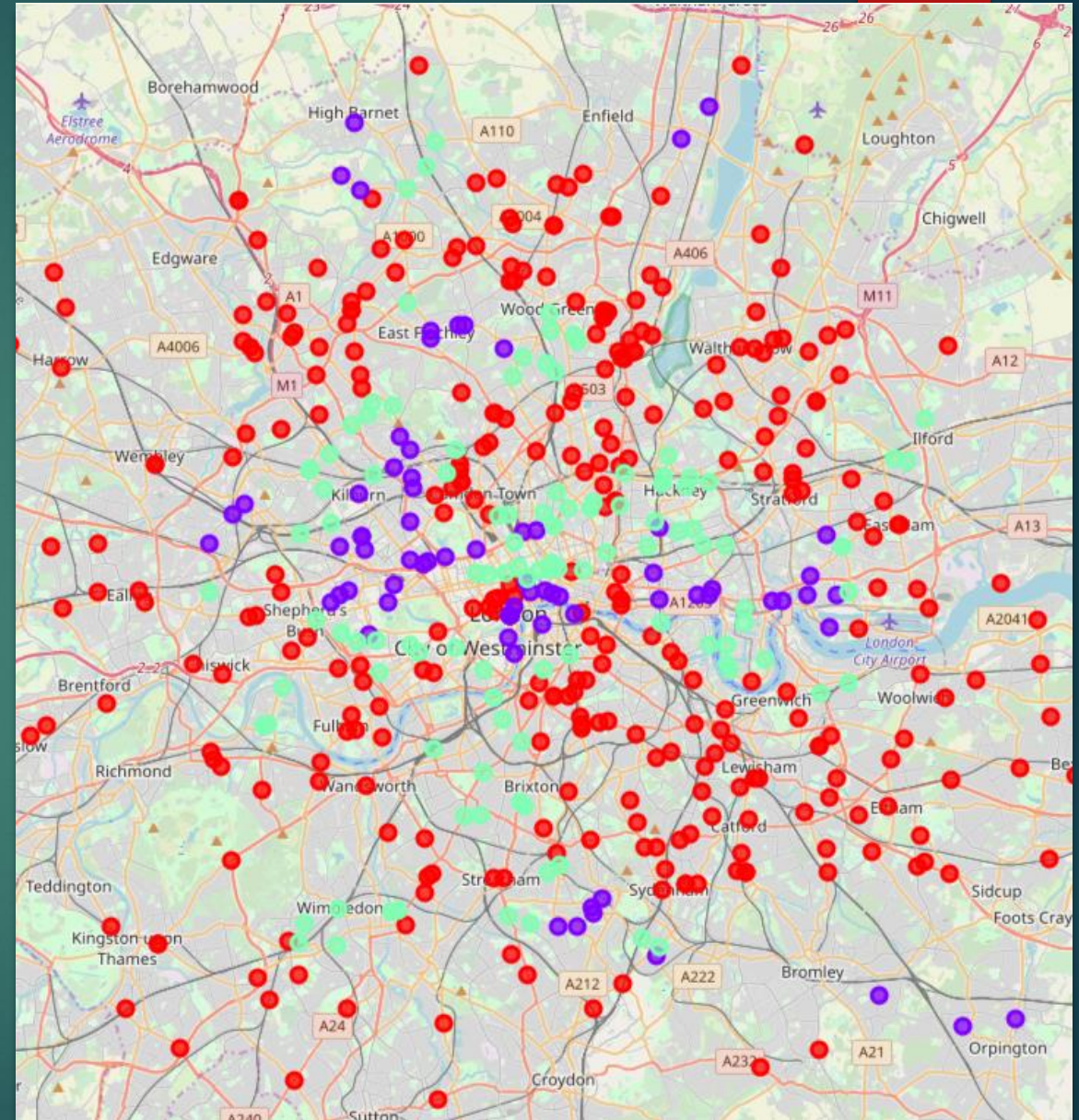
- ▶ Web Scraping Wikipedia page for neighborhood list
- ▶ Obtain latitude and longitude coordinates using Geocoder
- ▶ Use Foursquare API to get the venue data
- ▶ Group data by neighborhood and take the mean frequency of each occurrence of venue category
- ▶ Filter venue category by *Movie Theatres*
- ▶ Perform clustering on the data using k-means clustering
- ▶ Visualize the cluster in a map using Folium



# Results

Categorized the neighborhoods into three clusters:

- Cluster 0(Red): Neighborhoods with absolutely no number of Movie Theatres
- Cluster 1(Blue): Neighborhoods with high number of Movie Theatres
- Cluster 2(Green): Neighborhoods with moderate number of Movie Theatres



# Discussion

- ▶ Maximum number of Cineplex are present in Cluster 1 i.e., areas in Central London such as Marlylebone, Kensington, Westminster, etc.
- ▶ Fewer Cineplex are present in the areas of Walthamstow, West Hackney., etc and no Cineplex are present in areas such as Lewisham, Catford, Eltham., etc.
- ▶ Areas near Central London are not suitable for opening a new Cineplex and areas such in South East London and North London are suitable places to open a new Cineplex
- ▶ Suitable areas in South East London are Lewisham, Catford., etc and North London are Walthamstow, West Hackney., etc.

# Recommendations

- ▶ Opening a new Cineplex in neighborhoods in cluster 0 with no competition
- ▶ Also in neighborhoods in cluster 2 which has only less number of Movie Theatres in the area.
- ▶ Avoid neighborhoods in cluster 1 as there are more number of Movie Theatres present.



# Conclusion

- ▶ Answer to business question: The neighborhoods in cluster 0 are the most preferred locations to open a new Cineplex and second most preferred locations are neighborhoods in cluster 2.
- ▶ Final decision on optimal Cineplex location will be made by Property developers based on specific characteristics of neighbourhoods and locations in every recommended zone, taking into consideration additional factors like total population of each location (more number of people preferred), proximity to major roads, real estate availability, prices, social and economic dynamics of every neighbourhood etc.



THANK YOU