Deciding where to open a new venue in London, Outer Boroughs

1. Introduction

Background:

London is a great city. It is diverse, multicultural and full of opportunities. But there is also another side to its popularity and appeal. London is an expensive place to live and thrive. Many businesses want to open a venue here and many pay top price to have their window on Piccadilly or Oxford Street. With such a competitive market and high revenues (London GDP accounts for 25% of the whole country`s) it is challenging for newcomers to find a great place to make their first steps and competition if fiercer than ever. In this situation, there is no such thing as too much data to help make that choice.

Problem:

But what about those, who want to start their own business and cannot really afford to open in the City yet? Where is it best to open a new place? Where will it be cheapest and will have enough people living around to be popular? Where the competition is not too overwhelming? If we consider all of these questions, it might be a good idea to turn to data on the outer London boroughs, to look into the numbers with a bit more scrutiny.

Interest:

The analysis will be of interest to the following groups:

1. First time entrepreneurs, who want to start their first business. Below dataset will give a comprehensive insight into where best to open a new venue, to maximise the value for money.

2. People who already run a business and want to branch out. Given the extra information, it may provide valuable information before decision making.

2. Data acquisition and cleaning

Data Sources

As data sources the below were chosen:

1. Wikipedia list of London Boroughs with coordinates.

2. Foursquare data on the most popular venues in the respective boroughs

3. Online based data on rent in London boroughs

Data Cleaning

Once the dataset of London boroughs has been downloaded, we must edit the dataset provided to only have information, necessary for our problem. Wikipedia provided information on political situation, headquarters of the borough council etc. that will not be required. After cleaning, we will only be left with Name, Area, Population, Coordinates and rent prices for each borough. Since the dataset will only include outer boroughs, all the inner ones will be omitted as well.

Foursquare provides a dataset of venues around the specific coordinates or venues, if we use the "Explore" function in the Developer tab. Once requested, we get a full breakdown of all recorder venues around the boroughs of interest.

Feature Selection

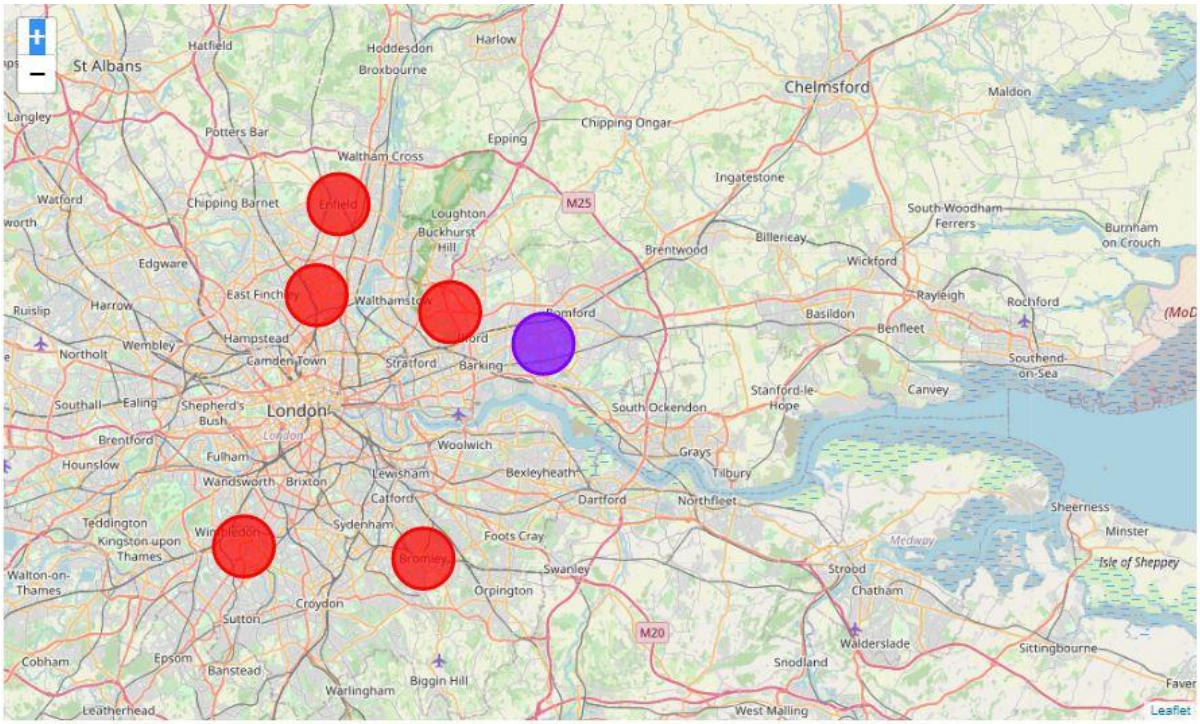
For convenience, we transform the dataset only to show top 5 places to work with. After that, we merge the data frames together for a comprehensive set of values, worth analysing.

	Borough	Area	Population	Latitude	Max_Rent	Longitude	Cluster Label	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
0	Barking and Dagenham	13.93	194352	51.554117	102.25	0.150504	1	Supermarket	Park	Grocery Store	Coffee Shop	Pub
1	Bexley	23.38	236687	39.969238	97.00	-82.936864	1	Pizza Place	Coffee Shop	Ice Cream Shop	Chinese Restaurant	Park
2	Bromley	57.97	317899	51.402805	118.50	0.014814	0	Pub	Coffee Shop	Grocery Store	Park	Gym / Fitness Center
3	Enfield	31.74	320524	51.652085	102.25	-0.081018	0	Coffee Shop	Pub	Turkish Restaurant	Park	Supermarket
4	Haringey	11.42	263386	51.587930	107.75	-0.105410	0	Pub	Café	Turkish Restaurant	Coffee Shop	Park
5	Havering	43.35	242080	51.004361	86.00	-2.337475	2	IT Services	Airfield	Electronics Store	Food & Drink Shop	Fish & Chips Shop
6	Merton	14.52	203223	51.410870	123.75	-0.188097	0	Pub	Park	Coffee Shop	Bar	Café
7	Redbridge	21.78	288272	51.576320	118.50	0.045410	0	Pub	Park	Coffee Shop	Restaurant	Italian Restaurant

3. Data Analysis

Clustering

Once the boroughs are selected, we will place them onto the map and cluster the boroughs to analyse the similar ones against each other and within the clusters themselves. Each of the clusters will be compared against the popularity of the venues, worth considering for a new business venture, as well as the hospitability of the venture climate. Depending on the area, population and rent, each of the clusters offer different advantages and disadvantages in terms of venue choices.



4. Results

Reviewing each cluster as per method above, we learn:

1. First cluster is heavy favouring pubs – predominantly as centres of socializing of the local communities. First cluster boroughs have majority of people living further from the central London, keeping to the old ways of pub socializing.

2. Second cluster, Barking and Dagenham and Bexley. People from these boroughs venture out to Pizza Place, Coffee Shop etc. These Boroughs can be considered for opening a new venue.

3. Third cluster, Havering is quite large in area and is quite heavily populated. People don't venture out quite often even though the rent is the least here.

4. Within top 5 places of interest in every borough is an ethnic restaurant. Because of the different ethnicities in the boroughs, some choices will be more favourable amongst the specific group in the area.

5. Rent price is not so much a factor for going out - the demand is not affected by difference in costs. There is a spike in rent price going into London, but further away the cost is not too much of an issue.

5. Discussion

Looking at the data, Barking and Dagenham and Bexley are the best places outside of Central London where a new venue is worth opening. However, a lot of information is not taken into account, and cannot be obtained from Foursquare Developer:

1. Higher ethnic presence in a given borough can and will influence the popularity of a given cuisine.
2. Closer proximity to Inner boroughs and better transport links allows people to travel to the neighbouring borough and impact the measurements
3. Many small venues are not registered in Foursquare and are marketed via word-of-mouth, and are not taken into account

Regardless, the analysis provided an insight into what people like and opt for, when it comes to going out in their own neighbourhoods.

6. Conclusion

Finally to conclude this project, I have had a good trial run at solving a real-life problem, using available data to find a business solution - choosing to open a venue in London .I have made use of some frequently used python libraries to manipulate data, use Foursquare API to explore the information on the Boroughs I looked into and managed to make a map of results, that allowed me to illustrate my point graphically and quite clearly to someone, not familiar with data manipulation and who only wants to know one thing - where will my venue be flourishing??