The Battle of the Neighbourhoods: IBM Coursera Data Science Professional Certificate

IBM Capstone Project

Where in South West London would be the best place to open a Healthy Eating Restaurant?

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Introduction

This Capstone Project will analyse data from London to answer the question: As the owner of a healthy eating restaurant chain, where in South West London should I open a new restaurant? The target audience for this project are companies looking to open healthy living facilities in South West London, specifically food places, who are unsure where exactly their venue should be located. During this project, various techniques will be used to answer the question, including data extraction, data wrangling and cleaning, machine learning algorithms, and data visualisation.

Background

A healthy eating restaurant chain owner has proposed a plan to open a new restaurant in South West London. The company saw an opportunity for the restaurant in South West London as it has so far been successful in various other areas in London. As there is always a focus on healthy eating and looking after yourself, the restaurant is a good way to make profit while promoting a healthy lifestyle even when deciding to eat out. With a population of 935,000 (2018), the South West London postcode seems like a good choice as the next place to open the popular healthy eating restaurant.

Business Problem

The task the company has put forward is to find out which Neighbourhood in South West London would be the best place to open the restaurant. The restaurant will need to be in an area where there are no other similar restaurants within a reasonable distance to generate more profit for the company. Therefore, the objective of this project is to find the best area in South West London for the restaurant to be located.

Data

Data Sources

London Location Data

London location data will be scraped from the following Wikipedia page https://en.wikipedia.org/wiki/List_of_areas_of_London. This page includes neighbourhood locations, the Borough they are in and other location data. The data will be extracted from the page using the BeautifulSoup package.

Latitude and Longitude Data

Latitude and Longitude coordinate data for each of the Neighbourhoods will be generated using the Python Geocoder package. This locational data is needed for finding nearby venues and plotting maps.

London Venue Data

The Foursquare API will be used to get the geographical data of the venues in South West London. Foursquare holds a database 105 million places, and provides various different categories of venue data.

Data Cleaning

After using the BeautifulSoup package to scrape the Wikipedia page of the relevant data, the resulting data frame was as follows:

	Neighbourhood	Borough	PostTown	PostCode	DialCode	GridRef
0	Abbey Wood	Bexley, Greenwich	LONDON	SE2	020	TQ465785
1	Acton	Ealing, Hammersmith and Fulham	LONDON	W3, W4	020	TQ205805
2	Addington	Croydon	CROYDON	CR0	020	TQ375645
3	Addiscombe	Croydon	CROYDON	CR0	020	TQ345665
4	Albany Park	Bexley	BEXLEY, SIDCUP	DA5, DA14	020	TQ478728
5	Aldborough Hatch	Redbridge	ILFORD	IG2	020	TQ455895
6	Aldgate	City	LONDON	EC3	020	TQ334813
7	Aldwych	Westminster	LONDON	WC2	020	TQ307810
8	Alperton	Brent	WEMBLEY	HA0	020	TQ185835
9	Anerley	Bromley	LONDON	SE20	020	TQ345695

Figure 1, Data Frame as a result of web scraping

The columns necessary for the project are the 'Neighbourhood', 'Borough', 'PostTown' and 'PostCode' columns. The last two columns can be dropped as they do not provide us with significant information for this project. Additionally, where there are Neighbourhoods with two postcode values, these will be split into different rows. Therefore, the resulting data frame now looks like this:

	Neighbourhood	Borough	PostTown	PostCode
0	Abbey Wood	Bexley, Greenwich	LONDON	SE2
1	Acton	Ealing, Hammersmith and Fulham	LONDON	W3
1	Acton	Ealing, Hammersmith and Fulham	LONDON	W4
2	Addington	Croydon	CROYDON	CR0
3	Addiscombe	Croydon	CROYDON	CR0

Figure 2, Data Frame with postcodes split into multiple rows

Finally, as the restaurant owner is looking to open the restaurant somewhere in South West London, we only need to keep the Neighbourhoods with the South West London postcode. This is how the data frame looks now:

	Neighbourhood	Borough	PostTown	PostCode
0	Balham	Wandsworth	LONDON	SW12
1	Barnes	Richmond upon Thames	LONDON	SW13
2	Battersea	Wandsworth	LONDON	SW11
3	Belgravia	Westminster	LONDON	SW1
4	Brixton	Lambeth	LONDON	SW2

Figure 3, Data Frame of South West London postcodes

Lastly, the latitude and longitude coordinates of each location are required for the next part of the analysis, where the venue data is obtained for each Neighbourhood. To get the lat/long coordinates of each Neighbourhood, the Geocoder package will be used with the arcgis_geocoder. A function will be defined to get the lat/long coordinates of each location and will be applied to the data frame so we can get the lat/long coordinates of any of the post codes in the data frame.

```
def get_latlong(arcgis_geocoder):

    lat_long = None

    while(lat_long is None):
        g = geocoder.arcgis('{}, London, United Kingdom'.format(arcgis_geocoder))
        lat_long = g.latlng
    return lat_long
```

Figure 4, Geocoder function

	Neighbourhood	Borough	PostTown	PostCode	Latitude	Longitude
0	Balham	Wandsworth	LONDON	SW12	51.44822	-0.14839
1	Barnes	Richmond upon Thames	LONDON	SW13	51.47457	-0.24212
2	Battersea	Wandsworth	LONDON	SW11	51.46760	-0.16290
3	Belgravia	Westminster	LONDON	SW1	51.49713	-0.13829
4	Brixton	Lambeth	LONDON	SW2	51.45295	-0.12083

Figure 5, Data Frame with lat/long coordinates of each Neighbourhood

Methodology

Exploratory Analysis

Now we can start our analysis on the final Data Frame. We need to get the venue location data for each Neighbourhood. To do this we will use the Foursquare API. We are most interested in the restaurant category. We need to know exactly where there are already restaurants located, as the owner does not want to open theirs in close proximity to another due to the risk of decreased profit. When we know which Neighbourhoods have the least restaurants, we can use them for further analysis.

Firstly, a map will be generated to show the different Neighbourhoods in South West London. The Folium package is used to do this.

```
#Create the map of the Neighbourhoods in London
map_london = folium.Map(location=[latitude, longitude], zoom_start=10)

for lat, lng, borough, neighbourhood, in zip(df2['Latitude'], df2['Longitude'], df2['Borough'], df2['Neighbourhood']):
    label = '{}, {}'.format(neighbourhood, borough)
    label = folium.Popup(label, parse_html=True)
    folium.CircleMarker(
        [lat, lng],
        radius=3,
        popup=label,
        color='purple',
        fill=True,
        fill_color='#3199cc',
        fill_opacity=0.3,
        parse_html=False).add_to(map_london)

map_london
```

Figure 6, Folium map generation code

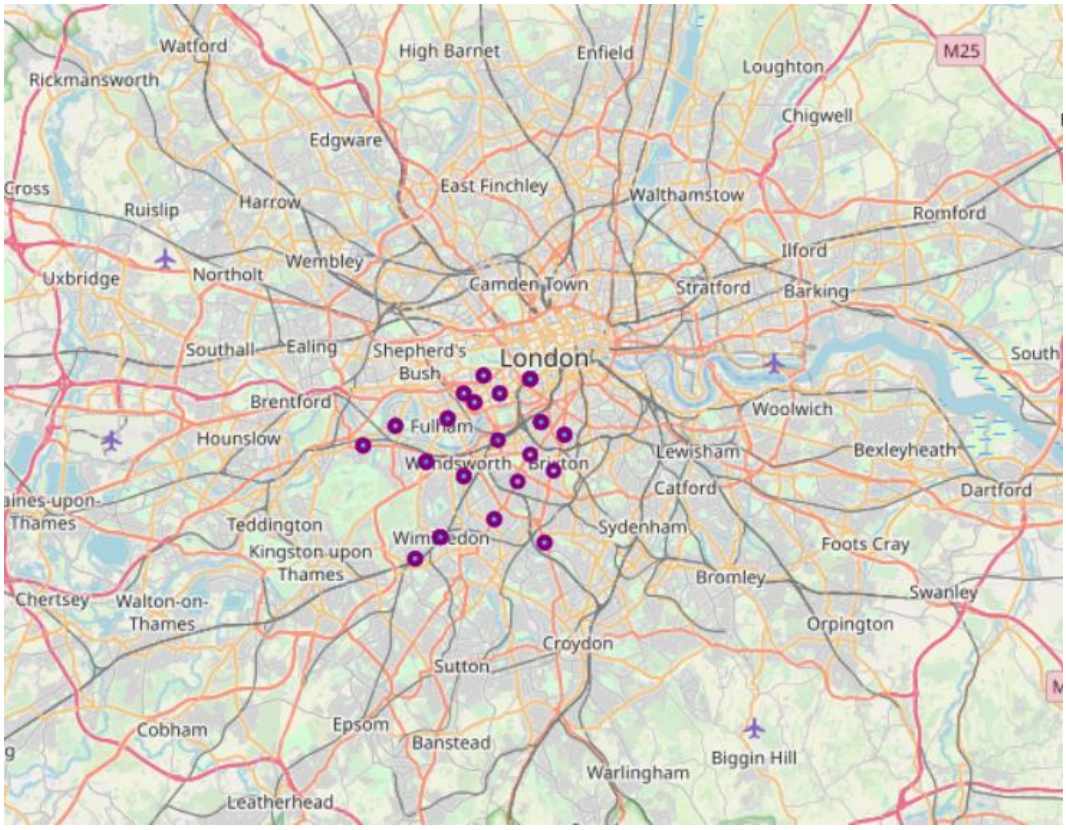

Figure 7, Folium map of South West London Neighbourhoods

To use Foursquare, we first need to get our credentials and version. Then we need to make a function to extract the category types of the venues. The newly obtained venue data will then be put into a data frame, and the columns named. The new data frame looked like this:

```
The venues data set contains 2539 venues.
```

	Neighborhood	Latitude	Longitude	Venue Name	Venue Latitude	Venue Longitude	Venue Category
0	Balham	51.44822	-0.14839	Ciullosteria	51.447144	-0.148981	Italian Restaurant
1	Balham	51.44822	-0.14839	M1LK	51.444450	-0.150913	Coffee Shop
2	Balham	51.44822	-0.14839	We Brought Beer	51.444324	-0.150656	Beer Store
3	Balham	51.44822	-0.14839	Brickwood Coffee & Bread	51.444509	-0.151127	Coffee Shop
4	Balham	51.44822	-0.14839	The Grove	51.448286	-0.150964	Pub

Figure 8, Data Frame with the Foursquare venue data of each Neighbourhood

We then looked at the number of unique categories there were from the new data frame:

	Count
Coffee Shop	174
Pub	153
Hotel	124
Café	112
Italian Restaurant	85
Sandwich Place	67
Indian Restaurant	67
Bar	62
Gym / Fitness Center	62
Bakery	53

Figure 9, number of unique venue categories

As we can see, the category 'Coffee Shop' is the most common venue with 174 from our South West London venue data frame. Additionally, we can see that both Italian and Indian restaurants have a high number, so we need to be mindful of this when deciding the location for the new Healthy Eating restaurant.

Next, because we are only interested in the Restaurant category for this project, the category needs to be extracted and put into a new data frame shown below. There are 597 rows in this data frame.

	Neighborhood	Latitude	Longitude	Venue Name	Venue Latitude	Venue Longitude	Venue Category
0	Balham	51.44822	-0.14839	Ciullosteria	51.447144	-0.148981	Italian Restaurant
9	Balham	51.44822	-0.14839	The Georgian	51.452242	-0.147677	Caucasian Restaurant
16	Balham	51.44822	-0.14839	Holy Cow	51.447371	-0.149012	Indian Restaurant
17	Balham	51.44822	-0.14839	The Kebab Company	51.445773	-0.150407	Fast Food Restaurant
20	Balham	51.44822	-0.14839	Nando's	51.445837	-0.150603	Portuguese Restaurant
29	Balham	51.44822	-0.14839	Megan's On The Hill	51.443974	-0.150208	Restaurant
31	Balham	51.44822	-0.14839	Chatkhara	51.452637	-0.147465	Indian Restaurant
33	Balham	51.44822	-0.14839	Chicken Cottage	51.452127	-0.147835	Fast Food Restaurant
37	Barnes	51.47457	-0.24212	Awesome Thai Cuisine	51.474905	-0.240909	Thai Restaurant
45	Barnes	51.47457	-0.24212	Côte Brasserie	51.472424	-0.246774	French Restaurant

Figure 10, Data Frame of restaurant category venues

This data can then be visualised on a map, again using the Folium package.

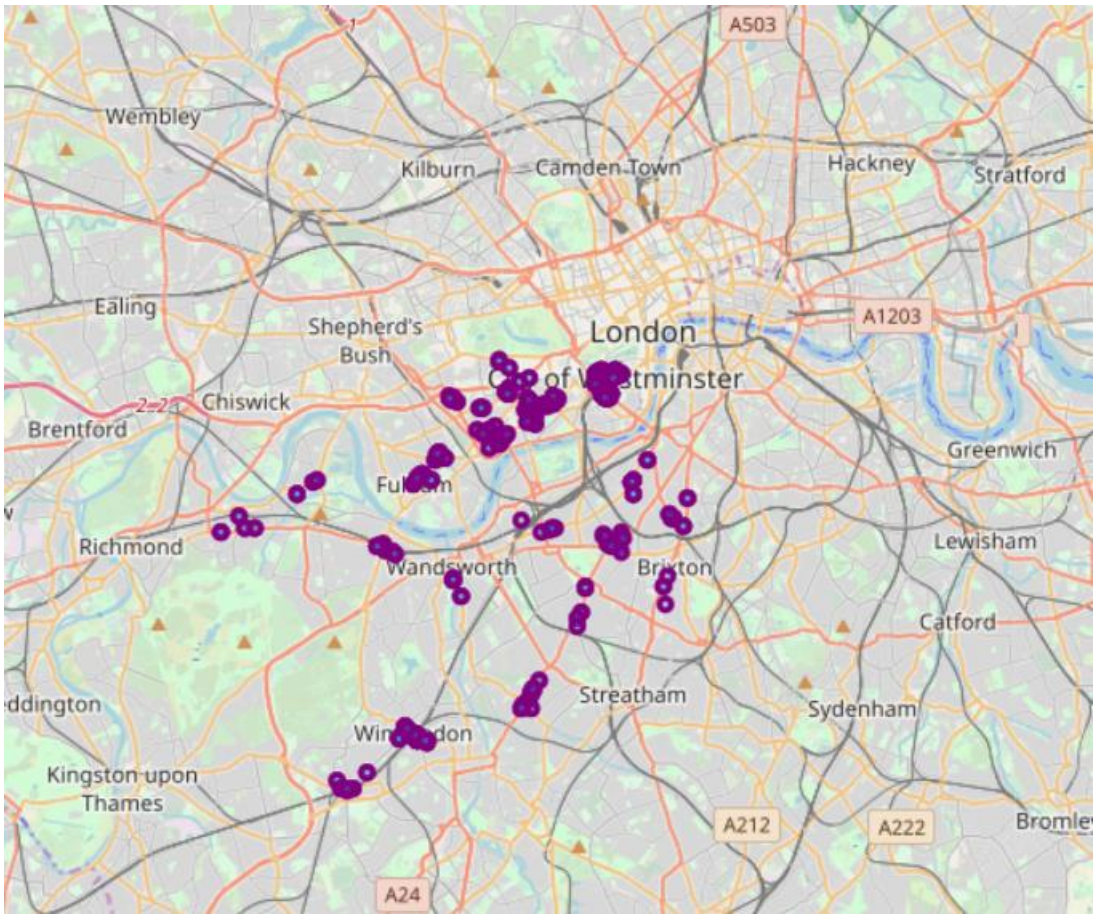

Figure 11, restaurant venues in South West London

Next, each venue was analysed in its Neighbourhood location. One hot encoding was used to turn the Restaurant categories into numerical data. Here is an extract of the data frame as a result of one hot encoding:

	Neighborhood	American Restaurant	Argentinian Restaurant	Art Gallery	Art Museum	Arts & Crafts Store	Asian Restaurant
0	Balham	0	0	0	0	0	0
1	Balham	0	0	0	0	0	0
2	Balham	0	0	0	0	0	0
3	Balham	0	0	0	0	0	0
4	Balham	0	0	0	0	0	0

Figure 12, one hot encoding data frame

For example, in this extract of the data frame, none of the locations have any of the restaurant categories. We then looked at the mean of each venue in each Neighbourhood:

	Neighborhood	American Restaurant	Argentinian Restaurant	Art Gallery	Art Museum	Arts & Crafts Store	Asian Restaurant	Australian Restaurant	Auto Garage	BBQ Joint	Bagel Shop	Bakery
0	Balham	0.0	0.0	0.000000	0.0	0.000000	0.0	0.000000	0.0	0.0	0.0	0.057143
1	Barnes	0.0	0.0	0.000000	0.0	0.000000	0.0	0.000000	0.0	0.0	0.0	0.045455
2	Battersea	0.0	0.0	0.000000	0.0	0.000000	0.0	0.000000	0.0	0.0	0.0	0.000000
3	Belgravia	0.0	0.0	0.010101	0.0	0.010101	0.0	0.010101	0.0	0.0	0.0	0.010101
4	Brixton	0.0	0.0	0.000000	0.0	0.000000	0.0	0.000000	0.0	0.0	0.0	0.038462

Figure 13, Data Frame showing the mean of each venue in each Neighbourhood

Next, the top 4 most common venues for each Neighbourhood were obtained. Here is an example of the 4 top venues in Chelsea, Clapham, Barnes and Battersea:

```
----Chelsea----
                venue  freq
0                Café  0.06
1                 Pub  0.05
2               Hotel  0.05
3  Japanese Restaurant  0.05

----Clapham----
          venue  freq
0           Pub  0.08
1          Café  0.06
2  Burger Joint  0.05
3    Restaurant  0.04

----Barnes----
               venue  freq
0       Pizza Place  0.09
1    Farmers Market  0.09
2              Park  0.09
3  Food & Drink Shop  0.09

----Battersea----
                venue  freq
0                Café  0.12
1                 Pub  0.08
2  Indian Restaurant  0.08
3        Supermarket  0.08
```

Figure 14, top 4 venue categories in Chelsea, Clapham, Barnes and Battersea

Now we will create a new data frame of the top 10 most common venues in each Neighbourhood. The extract displays up to the top 5 most common venues:

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
0	Balham	Coffee Shop	Grocery Store	Pub	Bakery	Indian Restaurant
1	Barnes	Food & Drink Shop	Farmers Market	Pub	Pizza Place	Park
2	Battersea	Café	Bar	Supermarket	Pub	Indian Restaurant
3	Belgravia	Coffee Shop	Hotel	Sandwich Place	Theater	Restaurant
4	Brixton	Pub	Coffee Shop	Indian Restaurant	Caribbean Restaurant	Portuguese Restaurant

Figure 15, Data Frame showing the top 10 venues for each Neighbourhood

K-Means Clustering

K-Means clustering is a task of identifying subgroups in the data such that data points in the same subgroup (cluster) are very similar while data points in different clusters are

very different. The data points in each cluster should be as similar as possible. The K-Means Clustering is an unsupervised method that identifies k number of centroids, and then allocates every data point to the nearest cluster, while keeping the centroids as small as possible. Next we set the number of clusters to 5:

```
array([0, 4, 0, 3, 0, 0, 4, 0, 0, 0, 3, 0, 0, 0, 3, 0, 3, 0, 3, 0, 2, 1,
       2, 0, 3, 0, 0, 0, 0, 3, 0, 0, 3, 2, 1, 0, 0, 2, 0, 0, 3, 0],
      dtype=int32)
```

Figure 16, array of k-means labels

Then a new data frame is created to include the Neighbourhoods and their top ten venues, as well as the Cluster Labels. Now, we are able to visualise the clusters using a Folium map. You can see the 5 clusters clearly as they are coloured red, green, orange, blue and purple:

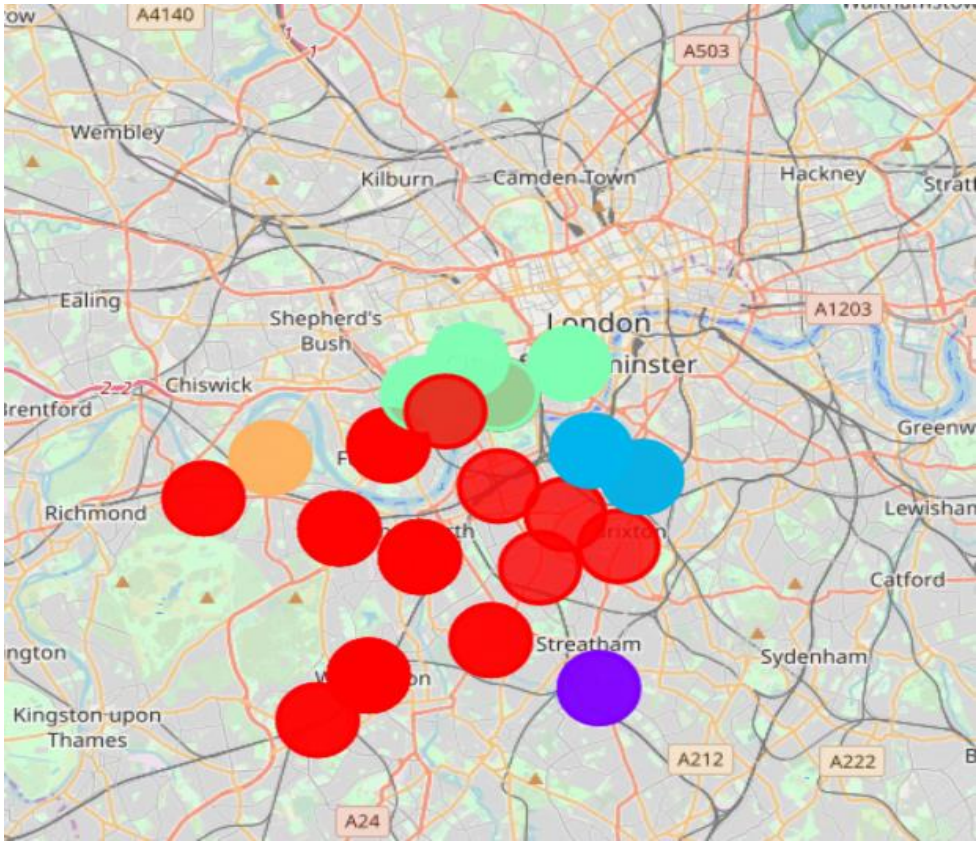

Figure 17, Folium map of the 5 clusters

Results

Cluster 1 had the largest number of Neighbourhoods at 28, and cluster 2 and 5 both had the smallest at 2 Neighbourhoods each.

Cluster 1

	Borough	Longitude	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	Cluster Labels	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	Wandsworth	-0.14839	Coffee Shop	Grocery Store	Pub	0	Bakery	Indian Restaurant	Fast Food Restaurant	Burger Joint	Café	Caucasian Restaurant	Shop & Service
2	Wandsworth	-0.16290	Café	Bar	Supermarket	0	Pub	Indian Restaurant	Seafood Restaurant	Breakfast Spot	Sandwich Place	Restaurant	Italian Restaurant
4	Lambeth	-0.12083	Pub	Coffee Shop	Indian Restaurant	0	Caribbean Restaurant	Portuguese Restaurant	Bike Shop	Convenience Store	Pizza Place	Restaurant	Music Venue
5	Lambeth	-0.11249	Pub	Coffee Shop	Indian Restaurant	0	Caribbean Restaurant	Portuguese Restaurant	Bike Shop	Convenience Store	Pizza Place	Restaurant	Music Venue
6	Kensington and Chelsea	-0.16248	Café	Pub	Hotel	0	Japanese Restaurant	Clothing Store	Coffee Shop	Gym / Fitness Center	English Restaurant	Bakery	Plaza
8	Kensington and Chelsea	-0.16248	Café	Pub	Hotel	0	Japanese Restaurant	Clothing Store	Coffee Shop	Gym / Fitness Center	English Restaurant	Bakery	Plaza
9	Lambeth, Wandsworth	-0.13922	Pub	Café	Burger Joint	0	Bar	Grocery Store	Gym / Fitness Center	Italian Restaurant	Coffee Shop	Restaurant	Bus Stop
10	Merton	-0.20796	Bar	Coffee Shop	Pub	0	Sushi Restaurant	Clothing Store	Sandwich Place	Indian Restaurant	Optical Shop	Grocery Store	Italian Restaurant
13	Wandsworth	-0.18997	Coffee Shop	Pub	Café	0	Supermarket	Gym	Park	Tennis Court	Fast Food Restaurant	Chocolate Shop	Burger Joint
14	Richmond upon Thames	-0.26591	Coffee Shop	Grocery Store	Pub	0	Pizza Place	American Restaurant	Beer Store	Pharmacy	Creperie	Chinese Restaurant	Middle Eastern Restaurant

The extract above does not show the whole of cluster 1. The most common venues are the Coffee Shop, Pub, Café and Bar. Restaurants appear in the 3rd most common venue column, in the Lambeth areas; Indian Restaurants are the 3rd most common venue, followed by a Caribbean and Portuguese restaurant. Likewise, Kensington and Chelsea have a Japanese restaurant as the 3rd most popular restaurant.

Cluster 2

	Borough	Longitude	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	Cluster Labels	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
23	Croydon	-0.12753	Pub	Bar	Pizza Place	1	Park	Diner	Burger Joint	Supermarket	Playground	Video Game Store	Grilled Meat Restaurant
41	Lambeth	-0.12753	Pub	Bar	Pizza Place	1	Park	Diner	Burger Joint	Supermarket	Playground	Video Game Store	Grilled Meat Restaurant

The most common venue in cluster 2 is Pub, followed by Bar and Pizza Place. This cluster also has a Burger Joint and Grilled Meat Restaurant within the top ten most common venues.

Cluster 3

	Borough	Longitude	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	Cluster Labels	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
22	Wandsworth	-0.13056	Pub	Portuguese Restaurant	Gym / Fitness Center	2	Fish & Chips Shop	Indian Restaurant	Pizza Place	Performing Arts Venue	Bakery	Coffee Shop	Bus Stop
24	Lambeth	-0.13056	Pub	Portuguese Restaurant	Indian Restaurant	2	Bakery	Park	Gym / Fitness Center	Pizza Place	Performing Arts Venue	Restaurant	Caribbean Restaurant
25	Lambeth	-0.11249	Pub	Portuguese Restaurant	Indian Restaurant	2	Bakery	Park	Gym / Fitness Center	Pizza Place	Performing Arts Venue	Restaurant	Caribbean Restaurant
39	Lambeth	-0.13056	Pub	Portuguese Restaurant	Indian Restaurant	2	Bakery	Park	Gym / Fitness Center	Pizza Place	Performing Arts Venue	Restaurant	Caribbean Restaurant
40	Lambeth	-0.11249	Pub	Portuguese Restaurant	Indian Restaurant	2	Bakery	Park	Gym / Fitness Center	Pizza Place	Performing Arts Venue	Restaurant	Caribbean Restaurant
44	Lambeth	-0.13056	Pub	Portuguese Restaurant	Gym / Fitness Center	2	Fish & Chips Shop	Indian Restaurant	Pizza Place	Performing Arts Venue	Bakery	Coffee Shop	Bus Stop

Cluster 3 has Pub as the most common venue and Portuguese Restaurant as the second most common. The third is Gym and Indian Restaurant. There is also a Park in the top ten and Gyms for different Neighbourhoods. This cluster has a variation of common venues.

Cluster 4

	Borough	Longitude	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	Cluster Labels	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
3	Westminster	-0.13829	Coffee Shop	Hotel	Sandwich Place	3	Theater	Restaurant	Gym / Fitness Center	Italian Restaurant	Pub	Hotel Bar	Sporting Goods Shop
11	Kensington and Chelsea	-0.18971	Hotel	Italian Restaurant	Garden	3	Pub	Grocery Store	Café	Cocktail Bar	Juice Bar	Indian Restaurant	Chinese Restaurant
12	Kensington and Chelsea	-0.18144	Hotel	Italian Restaurant	Garden	3	Pub	Grocery Store	Café	Cocktail Bar	Juice Bar	Indian Restaurant	Chinese Restaurant
16	Kensington and Chelsea	-0.17404	Café	Exhibit	Science Museum	3	Hotel	Italian Restaurant	Garden	Bar	Gift Shop	Bakery	Ice Cream Shop
18	Westminster	-0.13829	Coffee Shop	Hotel	Sandwich Place	3	Theater	Restaurant	Gym / Fitness Center	Italian Restaurant	Pub	Hotel Bar	Sporting Goods Shop
20	Westminster	-0.13829	Coffee Shop	Hotel	Sandwich Place	3	Theater	Restaurant	Gym / Fitness Center	Italian Restaurant	Pub	Hotel Bar	Sporting Goods Shop
27	Westminster	-0.13829	Coffee Shop	Hotel	Sandwich Place	3	Theater	Restaurant	Gym / Fitness Center	Italian Restaurant	Pub	Hotel Bar	Sporting Goods Shop
32	Kensington and Chelsea	-0.17404	Hotel	Café	Exhibit	3	Pub	Italian Restaurant	Garden	Science Museum	Japanese Restaurant	Bakery	Coffee Shop
33	Kensington and Chelsea	-0.16248	Hotel	Café	Exhibit	3	Pub	Italian Restaurant	Garden	Science Museum	Japanese Restaurant	Bakery	Coffee Shop

This extract does not show the whole of cluster 4. However, the most common venues are Coffee Shops, Hotels and a Café. This is followed by more Hotels, Cafes, an Exhibit and also an Italian Restaurant. There are also Sandwich Places, Gyms and Juice Bars, Theatres and Cocktail Bars within the top 10. The top restaurants are Italian, Indian, Japanese and Chinese.

Cluster 5

	Borough	Longitude	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	Cluster Labels	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	Richmond upon Thames	-0.24212	Food & Drink Shop	Farmers Market	Pub	4	Pizza Place	Park	Bakery	French Restaurant	Thai Restaurant	Movie Theater	Gastropub
7	Richmond upon Thames	-0.24212	Food & Drink Shop	Farmers Market	Pub	4	Pizza Place	Park	Bakery	French Restaurant	Thai Restaurant	Movie Theater	Gastropub

In cluster 5, Food and Drink Shop is the most common venue, followed by a farmers market. The most common restaurant venues are Pizza place, French Restaurant and Thai Restaurant. This cluster also has Movie Theatre as the 9th most common venue.

Discussion

Cluster 1 has the most varied choice of restaurants, including Caribbean and seafood. It is likely that there are healthy options in some of these restaurants, and because there is a wide range of cuisines, this cluster is not the best option to open the new healthy eating restaurant.

The most common venue in cluster 2 is a pub followed by a bar. A pizza place is the 3rd most common, and usually there are healthier options available when it comes to pizza, but we cannot come to this conclusion based on this data. There are 3 other restaurant venues in this cluster, as well as a supermarket, park, playground and video game store. As a supermarket is in this cluster, those who want to eat healthier may use the supermarket to buy their own ingredients and cook at home. Because of the close proximity to the supermarket, it has been decided that this cluster would not be the best location for the restaurant.

Cluster 3 does have a variety of restaurants already. However, it does have some other venues that promote a healthier lifestyle, including gyms as the one of the 3rd and the 6th most common venue type. Additionally, parks are the 5th most common venue. This cluster could be a good location for the new restaurant because the people in this location could be there to use the other venues that promote healthier lifestyle choices. Therefore, they could be more likely to want to eat in a restaurant that promotes varies

healthy options. There is a variety of restaurants in the area, but they may not necessarily have a variety of healthy options.

Cluster 4 already has a wide variety of venues and eating venues, including juice bars which include healthier choices. From the data, it is not clear whether the juice bars also have food options. Because of the variety, it has been decided that cluster 4 is not the best location for the healthy eating restaurant.

Cluster 5 includes Movie Theatre as the 9th most common venue, which could be somewhere that people visit before or after they go for a meal. This could mean that the healthy eating restaurant would be located well here. However, there are 6 different food places and a Farmers Market within the top 10 most common venues which means there is already a lot of competition. Therefore, it has been decided that cluster 5 will not be the location for the restaurant.

Conclusion

This objective of this project was to find the best area in South West London to open a new healthy eating restaurant. To conclude the project, the cluster that has been decided for the location of the new healthy eating restaurant is cluster 3. It was decided that this would be the best location because of the variety of venues in the location already, as well as the current restaurants in the area being different from the healthy eating one. Therefore, the restaurant will be located in Lambeth, in proximity to the gym/fitness centres and parks to attract those who are looking to make healthier lifestyle choices.