

Finding the best area to open a new leisure centre in London

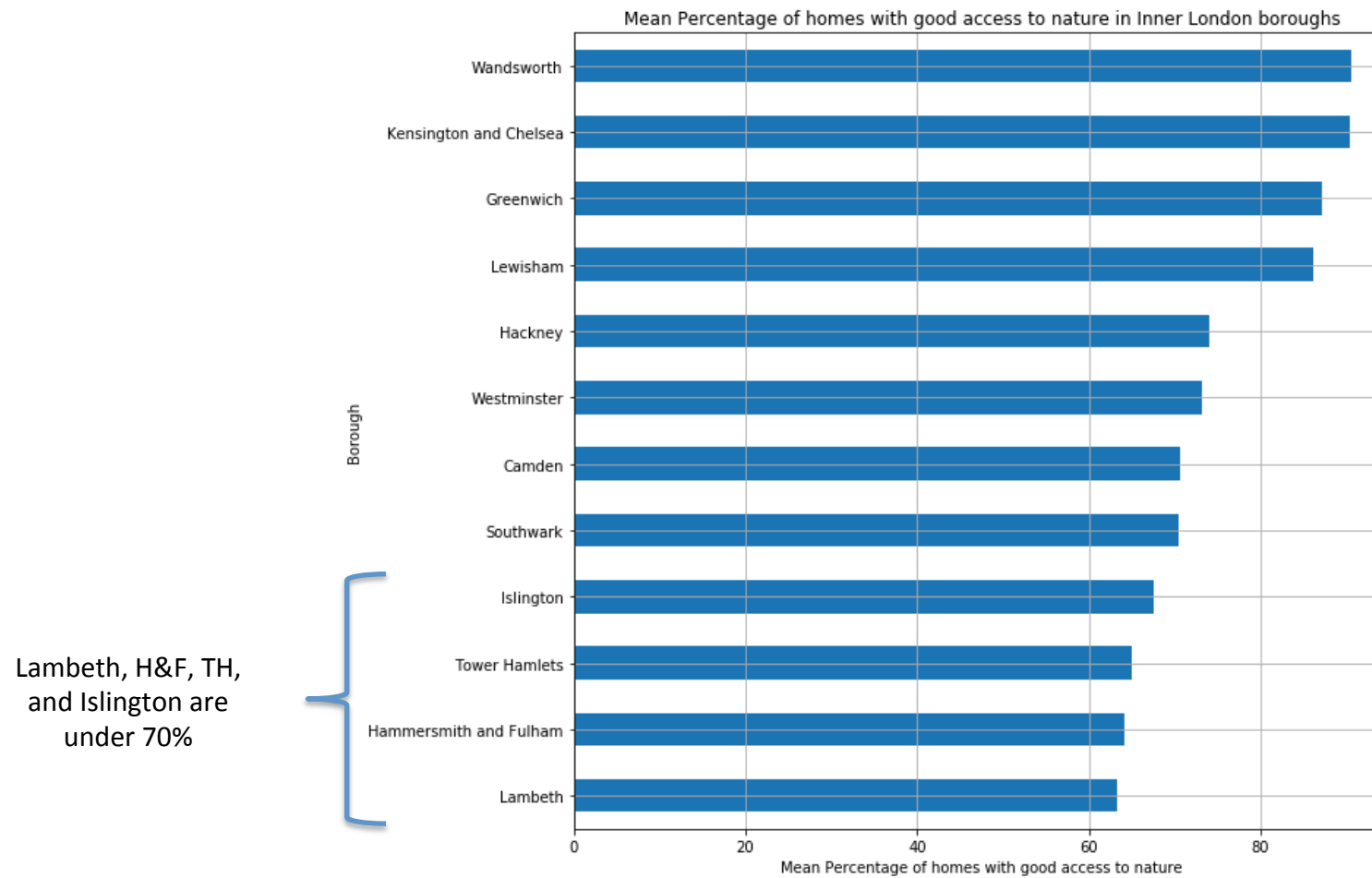
Finding the best area for a new business is fundamental

- Minimise business risks
- Optimise return of investment
- Increase turn over and profits

Data acquisition and cleaning

- Greenspace Information for Greater London
 - Percentage and count of residential households with access to at least one open space
 - source: London Datastore
- List of London Boroughs
 - List of the boroughs in Greater London
 - source: Wikipedia

The boroughs with a poor access to green spaces can be identified by merging the datasets



Clustering and Considerations

Cluster 2

```
# Cluster 2 busy area
london_merged.loc[london_merged['Cluster Labels'] == 2, london_merged.columns[[0] + list(range(3, london_merged.shape[1])
```

	Borough	Cluster Labels	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	Camden	2	Coffee Shop	Café	Hotel	Pub	Italian Restaurant	Pizza Place	Breakfast Spot	Train Station	Burger Joint	Falafel Restaurant
2	Hackney	2	Pub	Coffee Shop	Cocktail Bar	Bakery	Café	Brewery	Park	Clothing Store	Organic Grocery	Hotel
3	Hammersmith and Fulham	2	Pub	Café	Indian Restaurant	Italian Restaurant	Gastropub	Hotel	Coffee Shop	Clothing Store	Chinese Restaurant	Bus Stop
5	Kensington and Chelsea	2	Bakery	French Restaurant	Juice Bar	Café	Hotel	Burger Joint	Italian Restaurant	Spa	Restaurant	Pub
6	Lambeth	2	Caribbean Restaurant	Market	Pub	Coffee Shop	Gym / Fitness Center	Beer Bar	Pizza Place	Nightclub	Grocery Store	Sandwich Place
8	Southwark	2	Coffee Shop	Pub	Bar	Scenic Lookout	Cocktail Bar	Restaurant	French Restaurant	Hotel	English Restaurant	Italian Restaurant

- Lambeth has been identified with poor access to green areas, however looks like leisure centres have been implemented already and are also popular in the area. Therefore Lambeth can be excluded from our potential area.
- Leisure centres in Hammersmith & Fulham don't seem being popular. This area might have a good potential

Cluster 3

```
# Cluster 3 traveller area
```

```
london_merged.loc[london_merged['Cluster Labels'] == 3, london_merged.columns[[0] + list(range(3, london_merged.shape[1
```

	Borough	Cluster Labels	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
9	Tower Hamlets	3	Hotel	Sandwich Place	Coffee Shop	Italian Restaurant	Fried Chicken Joint	Light Rail Station	Café	Pub	Convenience Store	Grocery Store
11	Westminster	3	Hotel	Coffee Shop	Sandwich Place	Italian Restaurant	Theater	Sushi Restaurant	Pub	Gym / Fitness Center	Hotel Bar	Juice Bar

Cluster 0

```
# Cluster 0: Lively area
```

```
london_merged.loc[london_merged['Cluster Labels'] == 0, london_merged.columns[[0] + list(range(3, london_merged.shape[1
```

	Borough	Cluster Labels	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
4	Islington	0	Pub	Bakery	Ice Cream Shop	Park	Boutique	Burger Joint	Cocktail Bar	Turkish Restaurant	Music Venue	Theater

- Leisure centres in Tower Hamlets don't seem being popular. This area might have a good potential
- Islington has been identified with poor access to green areas, however looks like parks are quite popular in the area, therefore Islington can be excluded from our potential area.

Conclusions and future directions

- Hammersmith & Fulham, and Tower Hamlets could be suggested for being areas for a new leisure centres
- Further considerations should be taken on board such as actual number of gyms across London as well as the average age of the residents