

Most Favorable Area to Open a Restaurant in the UK

Project Description

This project will consist of an exploration of the way venues are distributed in three of the biggest cities in the UK. This will act as a reference for anyone interested in starting a business.

For the purpose of this project, the main focus will be regarding finding the best place to start a restaurant. An entrepreneur interested in such investment can make use of this project by, either, picking the location with the least amount of opened restaurants (to prevent fierce competition), or choosing to invest in the city with the most opened restaurants (which could be a sign that such investment is popular among residents).



Dataset

The data used will consist of:

- Postcodes dataframes of the three UK cities:

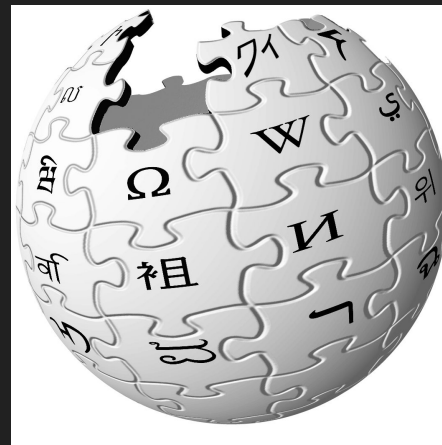
Source: https://en.wikipedia.org/wiki/List_of_postcode_areas_in_the_United_Kingdom

- Coordinates dataframes:

Source: <https://simplemaps.com/data/gb-cities>

- Foursquare dataframe of the venues:

Source: <https://www.foursquare.com>



Dataset with Coordinates

After the merging process was successful, the dataset has been compromised from being about 120 cities to 9 for the sake of not complicating the research especially since its main focus is on the top 3 cities.

	postcode	city	lat	lng
0	LO	London	51.514248	-0.093145
1	B	Birmingham	52.466667	-1.916667
2	M	Manchester	53.500000	-2.216667
3	LS	Leeds	53.800000	-1.583333
4	S	Sheffield	53.366667	-1.500000
5	G	Glasgow	55.833333	-4.250000
6	NG	Nottingham	52.966667	-1.166667
7	L	Liverpool	53.416667	-3.000000
8	SS	Southend-on-Sea	51.533333	0.700000

Foursquare Dataframe

Foursquare data frame showed us the 5 most common venues in the cities chosen.

	City	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
0	Birmingham	pub	restaurant	shop	park	theater
1	Glasgow	restaurant	bar	shop	park	pub
2	Leeds	shop	bar	pub	park	restaurant
3	Liverpool	shop	park	restaurant	pub	bar
4	London	hotel	art	bar	store	shop

Clusters

	city	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
2	Manchester	shop	restaurant	bar	pub	park
6	Nottingham	park	shop	pub	restaurant	bar
7	Liverpool	shop	park	restaurant	pub	bar
	city	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
0	London	hotel	art	bar	store	shop
8	Southend-on-Sea	bar	hotel	theater	shop	park
	city	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
5	Glasgow	restaurant	bar	shop	park	pub
	city	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
1	Birmingham	pub	restaurant	shop	park	theater

Clusters

The 4 clusters show that the three big cities in the UK are quite different since they did not meet in any cluster. In addition, a restaurant is not apparent to be the most common venue to any of the three big cities.

Thus, a better representation will be provided to ease the understanding of the data, which explains the reason behind the plots.