

REAL ESTATE INDEX IN LONDON

01

What it is ?

London is a city with a high population and population density. As from Real Estate investor point of view we want to invest in such places where the housing prices are low and the facilities (shops, restaurants, parks, Hotels, etc.) and social venues are nearby. Keeping above things in mind it is very difficult for an individual to find such place in such big city and gather this much information.



Data Collection or Feature Extraction

- Location
- post_town
- postcode district,
- dial code,
- os_grid_ref
- Area
- Avg yield
- Avg price
- £/sqft
- Latitude
- Longitude
- Venues

Data Sources

1. I found the List of areas of London with its boroughs and postcodes from Wikipedia.

(https://en.wikipedia.org/wiki/List_of_areas_of_London)

2. For housing prices, I searched and found a great website where latest London house prices were available with postal codes.

[<https://propertydata.co.uk/cities/london>]

3. I used Foursquare API to get the most common venues of given Borough of London. [<https://developer.foursquare.com/>]

4. For choropleth maps I used .geojson file of London.

[https://joshuaboyd1.carto.com/tables/london_boroughs_public]

Application of Machine Learning Algorithms

1. Mixed Social Venues
2. Hotels and Social Venues
3. Stores and seafood restaurants
4. Pubs and Historic places
5. Sports and Athletics
6. Restaurants and Bars

Price Labeling

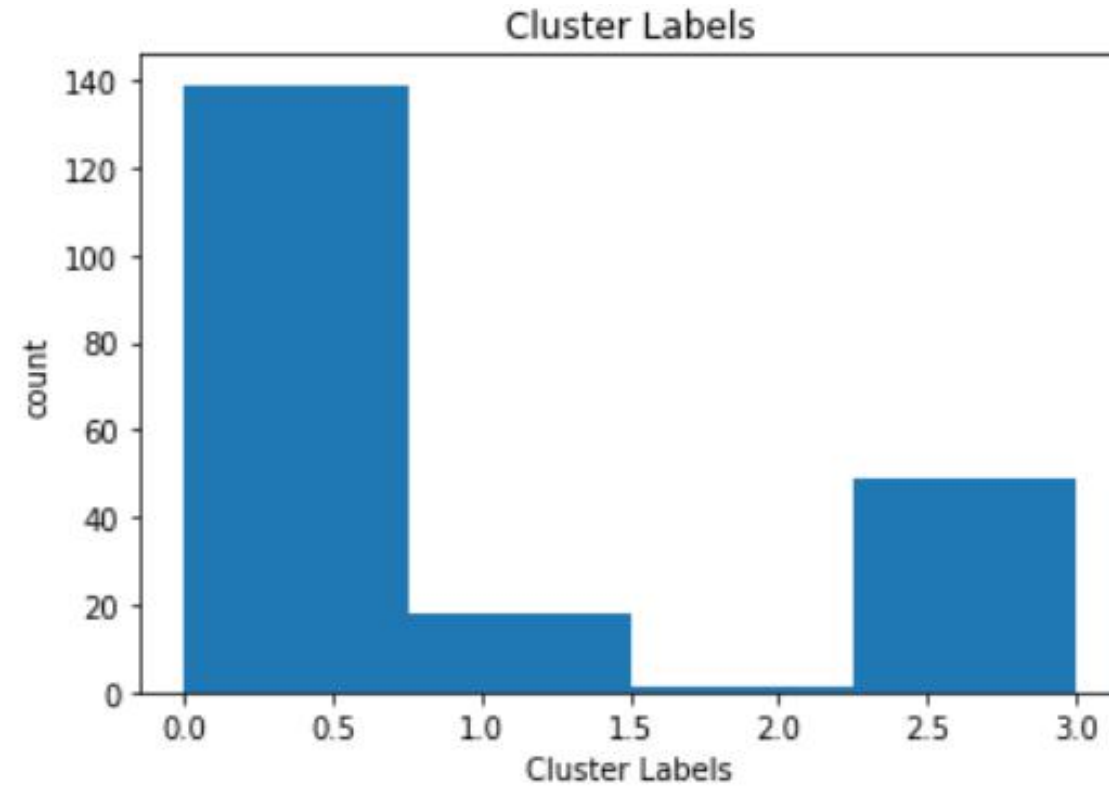
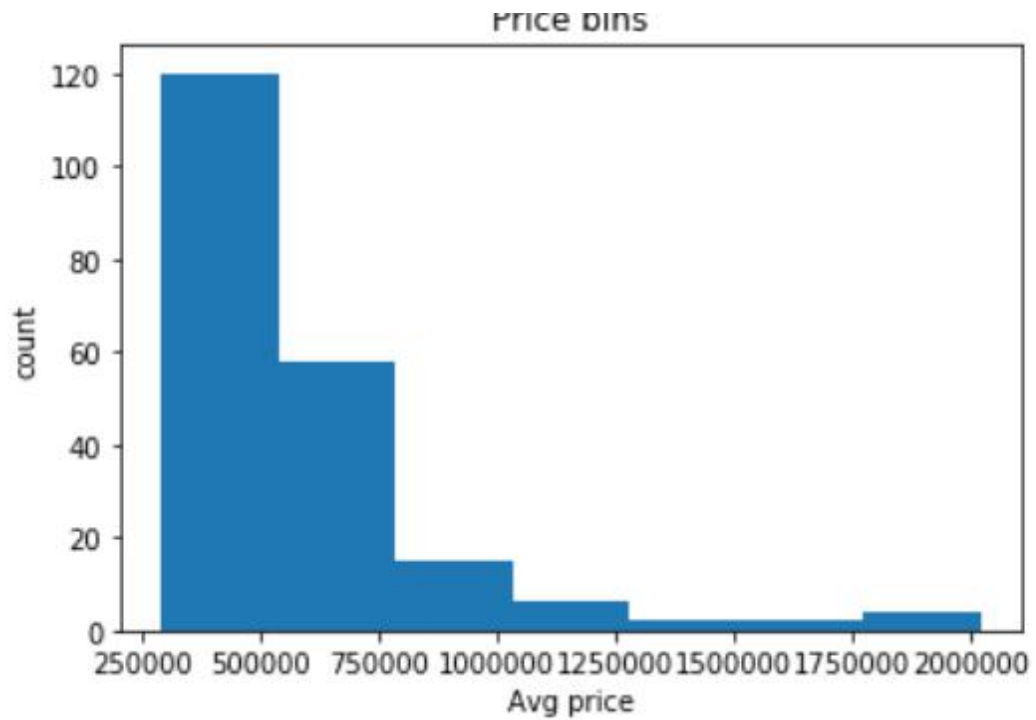
- ☐ ✓ >500000 : “Low Level 1”
- ☐ ✓ 500000–750000 : “Low Level 2”
- ☐ ✓ 750000–1000000 : “Average Level 1”
- ☐ ✓ 1000000–1250000 : “Average Level 2”
- ☐ ✓ 1250000–1750000 : “High Level 1”
- ☐ ✓ <1750000 : “High Level 2”

Outputs

	Location	London_borough	Postcode district	Avg price	Latitude	Longitude
0	Abbey Wood	Bexley	SE2	368046	51.492450	0.121270
1	Crossness	Bexley	SE2	368046	51.492450	0.121270
2	West Heath	Bexley	SE2	368046	51.492450	0.121270
3	Acton	Ealing	W3	529790	51.513240	-0.267460
4	Addington	Croydon	CR0	363083	51.384755	-0.051499

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Abbey Wood	51.49245	0.12127	Sainsbury's	51.492824	0.120724	Supermarket
1	Abbey Wood	51.49245	0.12127	Lesnes Abbey	51.489526	0.125839	Historic Site
2	Abbey Wood	51.49245	0.12127	Lidl	51.496152	0.118417	Supermarket
3	Abbey Wood	51.49245	0.12127	Abbey Wood Railway Station (ABW)	51.490825	0.123432	Train Station
4	Abbey Wood	51.49245	0.12127	Costcutter	51.491287	0.120938	Convenience Store

Pricing Charts and clusters



Final Data Model

	Location	London_borough	Post town	Postcode district	Avg price	Latitude	Longitude	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	Cluster-Category	Price-Categories
0	Abbey Wood	Bexley	LONDON	SE2	368046	51.492450	0.121270	1	Supermarket	Historic Site	Coffee Shop	Train Station	Convenience Store	Hotels and Social Venues	Low level 1
1	Acton	Ealing	LONDON	W3	529790	51.513240	-0.267460	0	Gas Station	Indian Restaurant	Train Station	Park	Grocery Store	Mixed Social Venues	Low level 1
2	Addington	Croydon	CROYDON	CR0	363083	51.384755	-0.051499	2	Grocery Store	Garden Center	Fish & Chips Shop	Fish Market	Flea Market	Stores and seafood restaurants	Low level 1
3	Albany Park	Bexley	BEXLEY	DA5	460081	51.506420	-0.127210	1	Hotel	Theater	Garden	Plaza	Art Gallery	Hotels and Social Venues	Low level 1

T H A N K S