

Rightmove.co.uk Rent Analysis

October 2, 2018

```
In [27]: #!pip install rightmove_webscraper
```

```
In [28]: # Imports:  
import pandas as pd  
import matplotlib.pyplot as plt  
import seaborn as sns  
import rightmove_webscraper  
import numpy as np  
##matplotlib inline
```

```
In [4]: # URL for all London properties to rent, added in last 24hrs:  
url = "http://www.rightmove.co.uk/property-to-rent/find.html?searchType=RENT&\nlocationIdentifier=REGION%5E87490&insId=1&radius=0.0&minPrice=&maxPrice=&\nminBedrooms=&maxBedrooms=&displayPropertyType=&maxDaysSinceAdded=1&\nsortByPriceDescending=&_includeLetAgreed=on&primaryDisplayPropertyType=&\nsecondaryDisplayPropertyType=&oldDisplayPropertyType=&\noldPrimaryDisplayPropertyType=&letType=&letFurnishType=&houseFlatShare="\n\n# Scrape rightmove:  
rightmove_data = rightmove_webscraper.rightmove_data(url)\n\n# Create DataFrame of results:  
df = rightmove_data.get_results
```

```
In [29]: #print(df)  
df.to_csv('output/row_data_rightmove_london_last_24hours_20181001.csv')
```

```
In [30]: print(df.columns)
```

```
Index(['price', 'type', 'address', 'url', 'agent_url', 'postcode',  
      'number_bedrooms', 'search_date'],  
      dtype='object')
```

```
In [31]: df.head()
```

```
Out[31]:   price      type      address \n0    2250  4 bedroom flat  Deptford High Street , Deptford , London , SE8
```

1	1408	1 bedroom flat	Meadow Road, London SW8
2	1235	1 bedroom flat	Lansdowne Way, London SW8
3	1582	1 bedroom flat	Vauxhall Grove, London SW8
4	1798	3 bedroom flat	Wandsworth Road, London SW8

	url \
0	http://www.rightmove.co.uk/property-to-rent/pr...
1	http://www.rightmove.co.uk/property-to-rent/pr...
2	http://www.rightmove.co.uk/property-to-rent/pr...
3	http://www.rightmove.co.uk/property-to-rent/pr...
4	http://www.rightmove.co.uk/property-to-rent/pr...

	agent_url	postcode	number_bedrooms \
0	http://www.rightmove.co.uk/estate-agents/agent...	SE8	4
1	http://www.rightmove.co.uk/estate-agents/agent...	SW8	1
2	http://www.rightmove.co.uk/estate-agents/agent...	SW8	1
3	http://www.rightmove.co.uk/estate-agents/agent...	SW8	1
4	http://www.rightmove.co.uk/estate-agents/agent...	SW8	3

	search_date
0	2018-10-01 10:12:39.983829
1	2018-10-01 10:12:39.983829
2	2018-10-01 10:12:39.983829
3	2018-10-01 10:12:39.983829
4	2018-10-01 10:12:39.983829

In [32]: df.dtypes

```
Out[32]: price          int64
         type          object
         address        object
         url            object
         agent_url      object
         postcode       object
         number_bedrooms object
         search_date     datetime64[ns]
         dtype: object
```

In [33]: df.describe()

```
Out[33]:
```

	price
count	476.000000
mean	2776.741597
std	4466.209750
min	400.000000
25%	1400.000000
50%	1798.000000
75%	2852.500000
max	86667.000000

```
In [34]: def count_unique(df, cols):
          for col in cols:
              print('\n' + 'For column ' + col)
              print(df[col].value_counts())

          cat_cols = ['price', 'type', 'address', 'url',
                      'agent_url', 'postcode', 'number_bedrooms', 'search_date']
          count_unique(df, cat_cols)
```

For column price

1300	16
1950	14
1400	12
1450	12
1750	12
1350	10
1500	9
1250	8
1200	8
1650	7
1100	7
1700	7
2600	7
2275	7
1842	6
2167	6
1150	6
1800	6
1798	5
2860	5
1647	5
2250	5
4767	5
1550	5
2817	4
800	4
1603	4
3033	4
3250	4
1387	4
..	
3098	1
1875	1
7367	1
1225	1
1235	1
1755	1

3293	1
1257	1
4333	1
2799	1
1777	1
1780	1
1521	1
1280	1
2197	1
1326	1
780	1
790	1
12567	1
3012	1
3358	1
3878	1
3879	1
11050	1
1840	1
825	1
1343	1
1348	1
1352	1
5633	1

Name: price, Length: 197, dtype: int64

For column type

2 bedroom flat	109
1 bedroom flat	82
2 bedroom apartment	56
1 bedroom apartment	39
Studio flat	35
3 bedroom flat	31
3 bedroom apartment	19
4 bedroom flat	12
4 bedroom terraced house	7
3 bedroom terraced house	5
5 bedroom detached house	5
2 bedroom terraced house	4
4 bedroom house	4
Studio apartment	4
4 bedroom semi-detached house	4
1 bedroom house share	4
2 bedroom maisonette	3
5 bedroom property	3
3 bedroom semi-detached house	3
6 bedroom terraced house	2
2 bedroom property	2

4 bedroom house share	2
2 bedroom detached house	2
4 bedroom apartment	2
4 bedroom maisonette	2
3 bedroom maisonette	2
3 bedroom property	2
4 bedroom detached house	2
1 bedroom flat share	2
2 bedroom house	2
5 bedroom terraced house	2
6 bedroom town house	1
2 bedroom penthouse	1
5 bedroom apartment	1
5 bedroom house share	1
2 bedroom end of terrace house	1
5 bedroom duplex	1
Property	1
5 bedroom flat	1
4 bedroom flat share	1
6 bedroom penthouse	1
2 bedroom ground floor flat	1
House share	1
3 bedroom town house	1
6 bedroom bungalow	1
3 bedroom house share	1
2 bedroom mews house	1
4 bedroom property	1
4 bedroom end of terrace house	1
1 bedroom maisonette	1
3 bedroom penthouse	1
3 bedroom mews house	1
3 bedroom house	1
1 bedroom ground floor flat	1
Name: type, dtype: int64	

For column address	
Hill Street, London, W1J	4
Valentia Place, Brixton	4
Douglas House, Toland Square, London, SW15	4
Deptford High Street , Deptford , London , SE8	3
Lingfield Road, SW19	3
Alexandra Road, SW19	3
Fingest House, Lilestone Street	3
Prince Of Wales Terrace, London, London, W8	3
Duke Street, London, W1K	3
Buchanan House, e17	2
Edgware Road, London, NW2	2
Burnbrae Close, North Finchley, London	2

Wynford Road, London, N1	2
Walm Lane, Willesden Green, NW2	2
Ballards Lane, London	2
Lynton Road, Bermondsey, London SE1	2
Lexington Buildings, Bow Quarter	2
Houndsden Road, Winchmore Hill, London	2
Antrim Road Belsize Park NW3	2
Ridgway, Wimbledon Village	2
Green Street, London, W1K	2
Eyre Court, 3-21 Finchley Road, St. John's Wood, London NW8	2
Mountpleasant Road, London, N17	2
Forest Hill SE23	2
Clarence Crescent, London, SW4	2
The Vale, Acton, W3	2
Wood Crescent, London, W12	2
Leigham Avenue, London, SW16	2
Discovery Dock East, London	1
Kelfield Mews, London, W10	1
..	
Cottenham Park Road, SW20	1
Raglan House	1
Lewisham High Street, SE13	1
Clapton Square, London, E5	1
Claremont House, 28, Quebec Way, Canada Water, London, SE16 7LF	1
Olympic Park Avenue, E20	1
Kent Court, E2	1
Almeric Road, London, SW11	1
Greencroft Gardens, South Hampstead	1
Brookdale Road, London, E17	1
Clipper Apartments, 5 Welland Street, Greenwich, SE10	1
Blackfriars Road, London, SE1	1
Kensington High Street, Kensington, W8	1
Strathyre Avenue, Norbury, SW16	1
Kersey Gardens, Mottingham, SE9	1
Northbrook Road, London, SE13	1
Rathbone Market, Barking Road, E16	1
Westferry Road, London, E14	1
Compton Crescent, Tottenham	1
Sherriff Road London NW6	1
Plumstead High Street, Plumstead	1
Wilbraham Place, London, London, SW1X	1
Simms Gardens, East Finchley, N2	1
Fingest House, Bernhardt Crescent, NW8	1
Flat 1, 39 Hill Street, London, London, W1J	1
21-33 Worple Road, SW19: 1 bed 1 rec 1 bath	1
Cleveland House, Hoe Street, Walthamstow, E17	1
Willow House, 4 Wellgarth Road, NW11	1
Okehampton Close, London, N12	1

Narborough Street, London

1

Name: address, Length: 436, dtype: int64

For column url

http://www.rightmove.co.uk/property-to-rent/property-67331305.html	4
http://www.rightmove.co.uk/property-to-rent/property-56656830.html	3
http://www.rightmove.co.uk/property-to-rent/property-67771522.html	3
http://www.rightmove.co.uk/property-to-rent/property-67772839.html	3
http://www.rightmove.co.uk/property-to-rent/property-67218757.html	2
http://www.rightmove.co.uk/property-to-rent/property-67766245.html	2
http://www.rightmove.co.uk/property-to-rent/property-56421762.html	2
http://www.rightmove.co.uk/property-to-rent/property-67766242.html	2
http://www.rightmove.co.uk/property-to-rent/property-56733117.html	2
http://www.rightmove.co.uk/property-to-rent/property-67770274.html	2
http://www.rightmove.co.uk/property-to-rent/property-56724153.html	2
http://www.rightmove.co.uk/property-to-rent/property-56669940.html	2
http://www.rightmove.co.uk/property-to-rent/property-74483036.html	2
http://www.rightmove.co.uk/property-to-rent/property-67770283.html	2
http://www.rightmove.co.uk/property-to-rent/property-67376560.html	2
http://www.rightmove.co.uk/property-to-rent/property-68399906.html	2
http://www.rightmove.co.uk/property-to-rent/property-75233282.html	1
http://www.rightmove.co.uk/property-to-rent/property-76005080.html	1
http://www.rightmove.co.uk/property-to-rent/property-67771099.html	1
http://www.rightmove.co.uk/property-to-rent/property-43551971.html	1
http://www.rightmove.co.uk/property-to-rent/property-67770847.html	1
http://www.rightmove.co.uk/property-to-rent/property-67772578.html	1
http://www.rightmove.co.uk/property-to-rent/property-67764697.html	1
http://www.rightmove.co.uk/property-to-rent/property-69734870.html	1
http://www.rightmove.co.uk/property-to-rent/property-67770385.html	1
http://www.rightmove.co.uk/property-to-rent/property-76006538.html	1
http://www.rightmove.co.uk/property-to-rent/property-69029189.html	1
http://www.rightmove.co.uk/property-to-rent/property-67771771.html	1
http://www.rightmove.co.uk/property-to-rent/property-76009871.html	1
http://www.rightmove.co.uk/property-to-rent/property-55778016.html	1
..	
http://www.rightmove.co.uk/property-to-rent/property-72548870.html	1
http://www.rightmove.co.uk/property-to-rent/property-67156816.html	1
http://www.rightmove.co.uk/property-to-rent/property-67377712.html	1
http://www.rightmove.co.uk/property-to-rent/property-67772530.html	1
http://www.rightmove.co.uk/property-to-rent/property-75599468.html	1
http://www.rightmove.co.uk/property-to-rent/property-76009025.html	1
http://www.rightmove.co.uk/property-to-rent/property-56248734.html	1
http://www.rightmove.co.uk/property-to-rent/property-67771288.html	1
http://www.rightmove.co.uk/property-to-rent/property-67770700.html	1
http://www.rightmove.co.uk/property-to-rent/property-63973067.html	1
http://www.rightmove.co.uk/property-to-rent/property-67769515.html	1
http://www.rightmove.co.uk/property-to-rent/property-66455071.html	1
http://www.rightmove.co.uk/property-to-rent/property-40757031.html	1

```

http://www.rightmove.co.uk/property-to-rent/property-76008854.html 1
http://www.rightmove.co.uk/property-to-rent/property-67771726.html 1
http://www.rightmove.co.uk/property-to-rent/property-67771840.html 1
http://www.rightmove.co.uk/property-to-rent/property-67434301.html 1
http://www.rightmove.co.uk/property-to-rent/property-75993515.html 1
http://www.rightmove.co.uk/property-to-rent/property-76007891.html 1
http://www.rightmove.co.uk/property-to-rent/property-67770142.html 1
http://www.rightmove.co.uk/property-to-rent/property-67770205.html 1
http://www.rightmove.co.uk/property-to-rent/property-74824205.html 1
http://www.rightmove.co.uk/property-to-rent/property-67773742.html 1
http://www.rightmove.co.uk/property-to-rent/property-75993365.html 1
http://www.rightmove.co.uk/property-to-rent/property-67771993.html 1
http://www.rightmove.co.uk/property-to-rent/property-67773601.html 1
http://www.rightmove.co.uk/property-to-rent/property-75386597.html 1
http://www.rightmove.co.uk/property-to-rent/property-75164150.html 1
http://www.rightmove.co.uk/property-to-rent/property-75584816.html 1
http://www.rightmove.co.uk/property-to-rent/property-67770820.html 1
Name: url, Length: 455, dtype: int64

```

For column agent_url

```

http://www.rightmove.co.uk/estate-agents/agent/OpenRent/London-96668.html
http://www.rightmove.co.uk/estate-agents/agent/Plaza-Estates/Marble-Arch-28956.html
http://www.rightmove.co.uk/estate-agents/agent/Plaza-Estates/Knightsbridge-28962.html
http://www.rightmove.co.uk/estate-agents/agent/Pure-Realty/London-106120.html
http://www.rightmove.co.uk/estate-agents/agent/Hostmaker/Bermondsey-186593.html
http://www.rightmove.co.uk/estate-agents/agent/Winchester-White/Wimbledon-51465.html
http://www.rightmove.co.uk/estate-agents/agent/UPAD/Nationwide-76034.html
http://www.rightmove.co.uk/estate-agents/agent/SN-Estates/Central-London-79945.html
http://www.rightmove.co.uk/estate-agents/agent/ludlowthompson/Kennington-Oval---Lettings-5479.ht
http://www.rightmove.co.uk/estate-agents/agent/Redac-Strattons/Regents-Park-99755.html
http://www.rightmove.co.uk/estate-agents/agent/Living-in-London/Canada-Water-Tube-Station-55268.
http://www.rightmove.co.uk/estate-agents/agent/Hometomovecouk/Mitcham-185441.html
http://www.rightmove.co.uk/estate-agents/agent/Free-Let/London-198032.html
http://www.rightmove.co.uk/estate-agents/agent/Orchards-Of-London/Acton-99235.html
http://www.rightmove.co.uk/estate-agents/agent/David-Astburys-Ltd/London-176261.html
http://www.rightmove.co.uk/estate-agents/agent/I-Am-The-Agent/Nationwide-90269.html
http://www.rightmove.co.uk/estate-agents/agent/Andrews-Letting-and-Management/Putney-34343.html
http://www.rightmove.co.uk/estate-agents/agent/Beresford-Residential/Brixton---Lettings-48330.ht
http://www.rightmove.co.uk/estate-agents/agent/Urbancouk/National-69212.html
http://www.rightmove.co.uk/estate-agents/agent/Liv-International/London-54583.html
http://www.rightmove.co.uk/estate-agents/agent/Aspire/North-Clapham-45021.html
http://www.rightmove.co.uk/estate-agents/agent/W-J-Meade/Highams-Park-25100.html
http://www.rightmove.co.uk/estate-agents/agent/Albany/Plaistow-16622.html
http://www.rightmove.co.uk/estate-agents/agent/Home-Made/London-156986.html
http://www.rightmove.co.uk/estate-agents/agent/Marsh-and-Parsons/North-Kensington-22344.html
http://www.rightmove.co.uk/estate-agents/agent/Champions/London-45441.html
http://www.rightmove.co.uk/estate-agents/agent/Purplebricks/covering-London-151079.html
http://www.rightmove.co.uk/estate-agents/agent/Lawson-S-Stone/New-Cross-189389.html

```


<http://www.rightmove.co.uk/estate-agents/agent/Acorn/New-Homes-Bromley-69095.html>
<http://www.rightmove.co.uk/estate-agents/agent/Kallars/London-169421.html>

<http://www.rightmove.co.uk/estate-agents/agent/Chancellors/Highgate-Lettings-41343.html>
<http://www.rightmove.co.uk/estate-agents/agent/Robinson-Jackson/Lewisham---Lettings-48483.html>
<http://www.rightmove.co.uk/estate-agents/agent/Portico/Camden-32250.html>
<http://www.rightmove.co.uk/estate-agents/agent/Acorn/Dulwich-50698.html>
<http://www.rightmove.co.uk/estate-agents/agent/Dexters/South-Kensington-50701.html>
<http://www.rightmove.co.uk/estate-agents/agent/Mountgrange-Heritage/Notting-Hill-32235.html>
<http://www.rightmove.co.uk/estate-agents/agent/Easymove/East-Ham---Lettings-78191.html>
<http://www.rightmove.co.uk/estate-agents/agent/Life-Residential/West-London--Lettings-54730.html>
<http://www.rightmove.co.uk/estate-agents/agent/Keller-Williams-Prime-Properties/London-146753.html>
<http://www.rightmove.co.uk/estate-agents/agent/Knightsbridge-Estates/London-105704.html>
<http://www.rightmove.co.uk/estate-agents/agent/Savills-Lettings/St-Johns-Wood-and-Regents-Park-5>
<http://www.rightmove.co.uk/estate-agents/agent/Keatons/Bow-25055.html>
<http://www.rightmove.co.uk/estate-agents/agent/Acorn/Crystal-Palace-50710.html>
<http://www.rightmove.co.uk/estate-agents/agent/Dexters/Chelsea-94643.html>
<http://www.rightmove.co.uk/estate-agents/agent/Homesearch-Properties/Romford-55307.html>
<http://www.rightmove.co.uk/estate-agents/agent/CH-Peppiatt/London-78269.html>
<http://www.rightmove.co.uk/estate-agents/agent/Chissick-Estates/Chigwell-124906.html>
<http://www.rightmove.co.uk/estate-agents/agent/Marsh-and-Parsons/Pimlico-53537.html>
<http://www.rightmove.co.uk/estate-agents/agent/Kings-Group/Walthamstow---Lettings-28985.html>
<http://www.rightmove.co.uk/estate-agents/agent/City-Living-London/London-66707.html>
<http://www.rightmove.co.uk/estate-agents/agent/haart/Camberwell-Green---Lettings-65665.html>
<http://www.rightmove.co.uk/estate-agents/agent/JLL/Elephant-and-Castle-183827.html>
<http://www.rightmove.co.uk/estate-agents/agent/Elite-Properties/Essex-45378.html>
<http://www.rightmove.co.uk/estate-agents/agent/Savills-Lettings/Brook-Green-and-Shepherds-Bush-->
<http://www.rightmove.co.uk/estate-agents/agent/Nicolas-Van-Patrick/London-189221.html>
<http://www.rightmove.co.uk/estate-agents/agent/Winkworth/Shepherds-Bush-33101.html>
<http://www.rightmove.co.uk/estate-agents/agent/J-S-and-Co-Estate-Agents-Ltd/Battersea-147923.htm>
<http://www.rightmove.co.uk/estate-agents/agent/Marsh-and-Parsons/Askew-Road-London-108343.html>
<http://www.rightmove.co.uk/estate-agents/agent/Go-View-London/Ealing-50304.html>
<http://www.rightmove.co.uk/estate-agents/agent/Allan-Howard-and-Co/Kenton-24095.html>
Name: agent_url, Length: 249, dtype: int64

For column postcode

SW19	15
W1J	13
W2	13
SW7	10
N1	10
E14	10
NW2	9
NW3	9
W8	9
W1K	8
W6	8
SE1	8

NW8	7
SW8	7
W14	7
SW15	7
SW11	7
SE13	6
E1	6
NW1	6
SE10	6
SE16	6
W12	5
SW16	5
SE8	5
E17	5
E3	5
SW4	5
NW6	5
N17	4
..	
SE3	1
SE24	1
N22	1
N10	1
EC1V	1
nw1	1
SW1W	1
SE25	1
W1T	1
EC2A	1
W1G	1
SE20	1
E9	1
E11	1
EC2Y	1
E7	1
E20	1
NW7	1
N16	1
W5	1
N2	1
EN2	1
NW5	1
SW1P	1
N12	1
SW10	1
N5	1
WC1X	1
N7	1

```
E18      1
Name: postcode, Length: 103, dtype: int64
```

For column `number_bedrooms`

2 182

1 129

3 67

0 39

4 38

5 14

6 5

Name: number_bedrooms, dtype: int64

For column search_date

2018-10-01 10:12:39.983829 476

```
Name: search_date, dtype: int64
```

```
In [35]: def plotBars(df, cols):
    for col in cols:
        fig = plt.figure(figsize=(25,5)) # define plot area
        ax = fig.gca() # define axis
        counts = df[col].value_counts() # find the counts for each unique category
        counts.plot.bar(ax = ax, color = 'blue') # Use the plot.bar method on the counts
        ax.set_title('Number of houses by ' + col) # Give the plot a main title
        ax.set_xlabel(col) # Set text for the x axis
        ax.set_ylabel('Number of houses') # Set text for y axis
        plt.show()

    plot_cols = ['postcode', 'number_bedrooms', 'type']
    plotBars(df, plot_cols)
```



