

```
In [1]: import numpy as np
import pandas as pd
import seaborn as sns
from matplotlib import pyplot as plt
%matplotlib inline
```

```
In [24]: data=pd.read_csv(r'C:\Users\mujjj\Downloads\5. London Housing Data.csv')
```

```
In [25]: data
```

Out[25]:

|       | date      | area           | average_price | code      | houses_sold | no_of_crimes |
|-------|-----------|----------------|---------------|-----------|-------------|--------------|
| 0     | 1/1/1995  | city of london | 91449         | E09000001 | 17.0        | NaN          |
| 1     | 2/1/1995  | city of london | 82203         | E09000001 | 7.0         | NaN          |
| 2     | 3/1/1995  | city of london | 79121         | E09000001 | 14.0        | NaN          |
| 3     | 4/1/1995  | city of london | 77101         | E09000001 | 7.0         | NaN          |
| 4     | 5/1/1995  | city of london | 84409         | E09000001 | 10.0        | NaN          |
| ...   | ...       | ...            | ...           | ...       | ...         | ...          |
| 13544 | 9/1/2019  | england        | 249942        | E92000001 | 64605.0     | NaN          |
| 13545 | 10/1/2019 | england        | 249376        | E92000001 | 68677.0     | NaN          |
| 13546 | 11/1/2019 | england        | 248515        | E92000001 | 67814.0     | NaN          |
| 13547 | 12/1/2019 | england        | 250410        | E92000001 | NaN         | NaN          |
| 13548 | 1/1/2020  | england        | 247355        | E92000001 | NaN         | NaN          |

13549 rows × 6 columns

```
In [26]: data.shape
```

Out[26]: (13549, 6)

```
In [27]: data.columns
```

Out[27]: Index(['date', 'area', 'average\_price', 'code', 'houses\_sold', 'no\_of\_crimes'], dtype='object')

```
In [29]: data.describe()
```

Out[29]:

|       | average_price | houses_sold   | no_of_crimes |
|-------|---------------|---------------|--------------|
| count | 1.354900e+04  | 13455.000000  | 7439.000000  |
| mean  | 2.635197e+05  | 3893.994129   | 2158.352063  |
| std   | 1.876175e+05  | 12114.402476  | 902.087742   |
| min   | 4.072200e+04  | 2.000000      | 0.000000     |
| 25%   | 1.323800e+05  | 247.000000    | 1623.000000  |
| 50%   | 2.229190e+05  | 371.000000    | 2132.000000  |
| 75%   | 3.368430e+05  | 3146.000000   | 2582.000000  |
| max   | 1.463378e+06  | 132163.000000 | 7461.000000  |

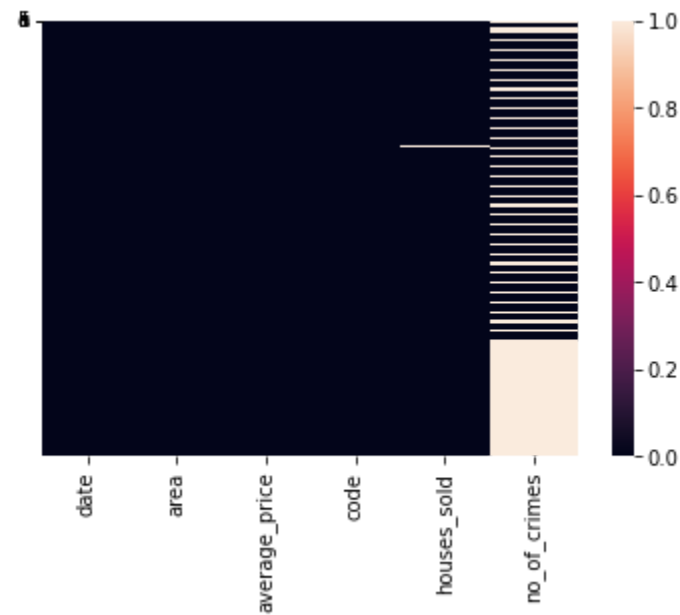
```
In [30]: data.count()
```

Out[30]: date 13549  
area 13549  
average\_price 13549  
code 13549  
houses\_sold 13455  
no\_of\_crimes 7439  
dtype: int64

```
In [35]: data.isnull().sum()
```

Out[35]: date 0  
area 0  
average\_price 0  
code 0  
houses\_sold 94  
no\_of\_crimes 6110  
dtype: int64

```
In [42]: sns.heatmap(data.isnull(),yticklabels='False',cbar=True)
plt.show()
```



```
In [43]: data.dtypes
```

Out[43]: date object  
area object  
average\_price int64  
code object  
houses\_sold float64  
no\_of\_crimes float64  
dtype: object

## Convert the datatype of 'Date' into Date\_Time formet

```
In [44]: data.head()
```

Out[44]:

|   | date     | area           | average_price | code      | houses_sold | no_of_crimes |
|---|----------|----------------|---------------|-----------|-------------|--------------|
| 0 | 1/1/1995 | city of london | 91449         | E09000001 | 17.0        | NaN          |
| 1 | 2/1/1995 | city of london | 82203         | E09000001 | 7.0         | NaN          |
| 2 | 3/1/1995 | city of london | 79121         | E09000001 | 14.0        | NaN          |
| 3 | 4/1/1995 | city of london | 77101         | E09000001 | 7.0         | NaN          |
| 4 | 5/1/1995 | city of london | 84409         | E09000001 | 10.0        | NaN          |

```
In [ ]:
```