

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
```

```
df=pd.read_csv('/content/drive/MyDrive/DataSet/Real estate.csv')
df.head()
```

	No	X1 transaction date	X2 house age	X3 distance to the nearest MRT station	X4 number of convenience stores	X5 latitude	X6 longitude	Y house price of unit area
0	1	2012.917	32.0	84.87882	10	24.98298	121.54024	37.9
1	2	2012.917	19.5	306.59470	9	24.98034	121.53951	42.2
2	3	2013.583	13.3	561.98450	5	24.98746	121.54391	47.3
3	4	2013.500	13.3	561.98450	5	24.98746	121.54391	54.8

```
df.shape
```

```
(414, 8)
```

```
X=df.iloc[:,1:-1]
Y=df['Y house price of unit area']
```

```
from sklearn.model_selection import train_test_split
```

```
X_train,X_test,Y_train,Y_test=train_test_split(X,Y,test_size=0.3,random_state=3)
```

```
X_train
```



	X1 transaction date	X2 house age	X3 distance to the nearest MRT station	X4 number of convenience stores	X5 latitude	X6 longitude
<b>75</b>	2013.500	12.3	1360.1390	1	24.95204	121.54842
<b>14</b>	2013.500	13.2	1164.8380	4	24.99156	121.53406
<b>397</b>	2013.417	13.1	1164.8380	4	24.99156	121.53406
<b>47</b>	2013.583	35.9	640.7391	3	24.97563	121.53715
<b>46</b>	2013.417	21.7	463.9623	9	24.97030	121.54458
...	...	...	...	...	...	...
<b>256</b>	2012.667	14.6	339.2289	1	24.97519	121.53151
<b>131</b>	2013.500	4.0	2147.3760	3	24.96299	121.51284
<b>249</b>	2012.833	18.0	6306.1530	1	24.95743	121.47516
<b>152</b>	2013.333	12.0	1360.1390	1	24.95204	121.54842
<b>362</b>	2013.417	17.1	967.4000	4	24.98872	121.53408

```
from sklearn.linear_model import LinearRegression
model=LinearRegression()
```

```
model.fit(X_train,Y_train)
```

```
LinearRegression()
```

```
y_pred=model.predict(X_test)
```


```
from sklearn.metrics import r2_score
```

```
score=r2_score(Y_test,y_pred)
score
```

0.61013019865237

```
z=pd.DataFrame({'actual':Y_test,'predicted':y_pred})
```

```
Pz.head()
```

	actual	predicted	
<b>161</b>	39.6	41.400219	
<b>130</b>	37.5	44.632017	
<b>227</b>	40.2	43.212812	
<b>103</b>	45.7	44.031988	
<b>240</b>	28.8	33.343182	

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