Simple Linear Regression

#on house data

In [1]:
```
import numpy as np
```

In [2]:
```
import pandas as pd
```

In [3]:
```
from subprocess import check_output
```

In [9]:
```
import matplotlib.pyplot as plt
```

In [10]:
```
dataset=pd.read_csv(r'C:\Users\yogay\OneDrive\Desktop\Yogita_Yadav\Data Science\2nd\SLR - Practicle\House_data.csv
```

In [11]:
```
dataset
```

Out[11]:

	id	date	price	bedrooms	bathrooms	sqft_living	sqft_lot	floors	waterfront	view	...	grade	sqft_above
0	7129300520	20141013T000000	221900.0	3	1.00	1180	5650	1.0	0	0	...	7	1180
1	6414100192	20141209T000000	538000.0	3	2.25	2570	7242	2.0	0	0	...	7	2170
2	5631500400	20150225T000000	180000.0	2	1.00	770	10000	1.0	0	0	...	6	770
3	2487200875	20141209T000000	604000.0	4	3.00	1960	5000	1.0	0	0	...	7	1050
4	1954400510	20150218T000000	510000.0	3	2.00	1680	8080	1.0	0	0	...	8	1680
...	...	...	...	...	...	...	...	...	...	...	...	...	...
21608	263000018	20140521T000000	360000.0	3	2.50	1530	1131	3.0	0	0	...	8	1530
21609	6600060120	20150223T000000	400000.0	4	2.50	2310	5813	2.0	0	0	...	8	2310
21610	1523300141	20140623T000000	402101.0	2	0.75	1020	1350	2.0	0	0	...	7	1020
21611	291310100	20150116T000000	400000.0	3	2.50	1600	2388	2.0	0	0	...	8	1600
21612	1523300157	20141015T000000	325000.0	2	0.75	1020	1076	2.0	0	0	...	7	1020

21613 rows × 21 columns

In [12]:
```
space=dataset['sqft_living']
price=dataset['price']
```

In [13]:
```
x = np.array(space).reshape(-1, 1)
y = np.array(price)
```

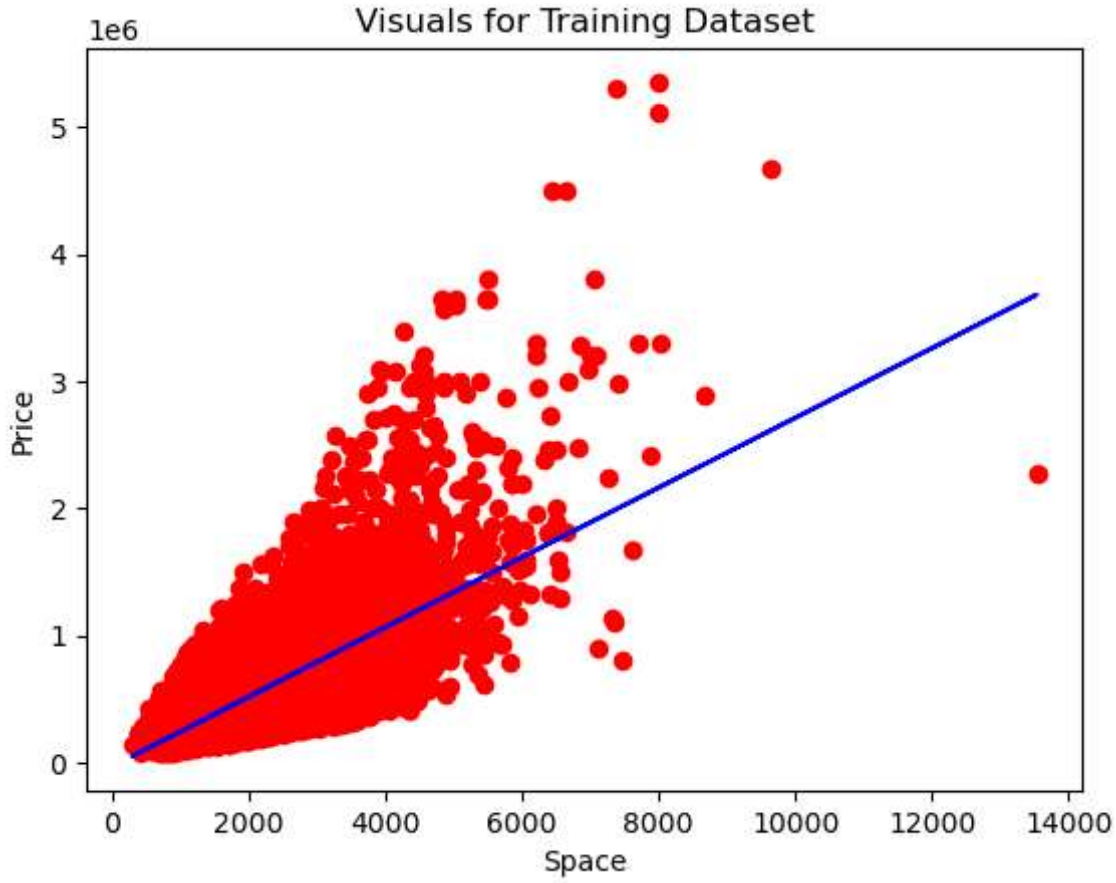
In [15]:
```
from sklearn.model_selection import train_test_split
xtrain, xtest, ytrain, ytest = train_test_split(x,y,test_size=1/3, random_state=0)
```

In [16]:
```
from sklearn.linear_model import LinearRegression
regressor = LinearRegression()
regressor.fit(xtrain, ytrain)
```

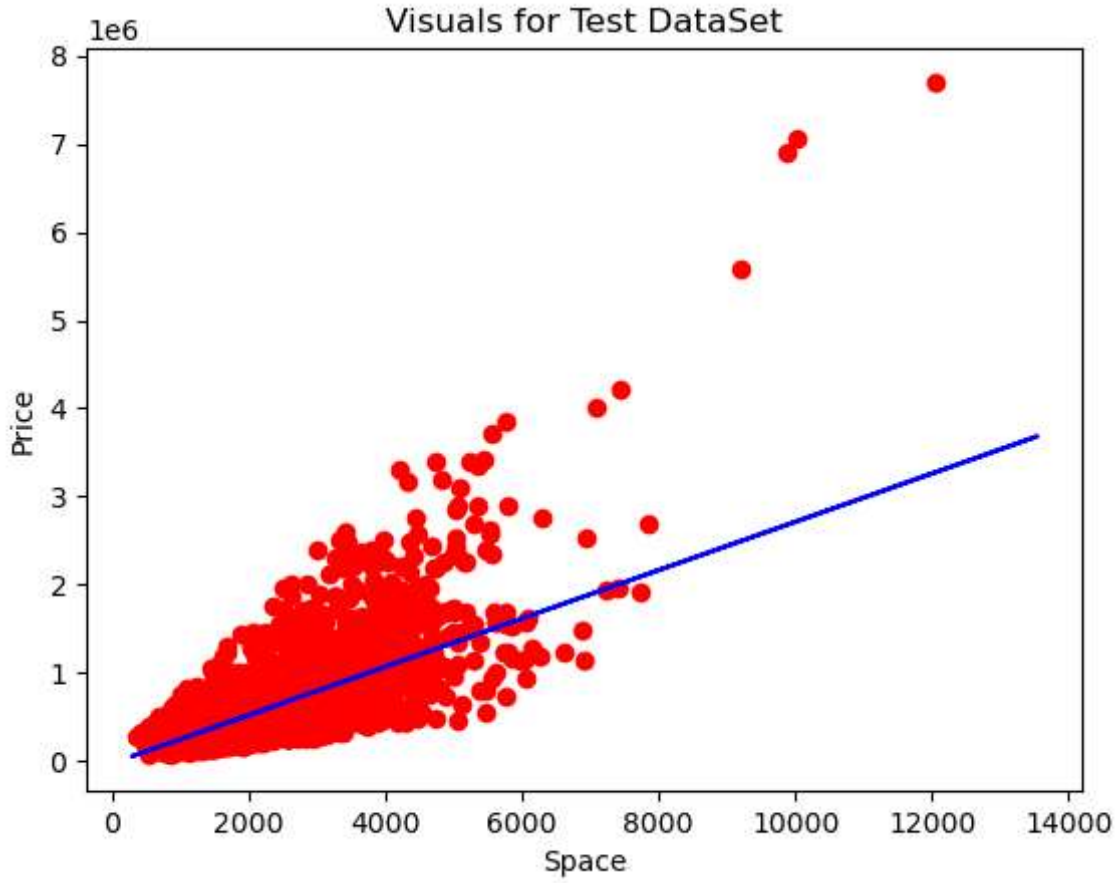
Out[16]:
```
▾ LinearRegression

LinearRegression()
```

In [17]:
```
pred = regressor.predict(xtest)
```

In [18]:
```
plt.scatter(xtrain, ytrain, color= 'red')
plt.plot(xtrain, regressor.predict(xtrain), color = 'blue')
plt.title ("Visuals for Training Dataset")
plt.xlabel("Space")
plt.ylabel("Price")
plt.show()
```



In [19]:
```
plt.scatter(xtest, ytest, color= 'red')
plt.plot(xtrain, regressor.predict(xtrain), color = 'blue')
plt.title("Visuals for Test DataSet")
plt.xlabel("Space")
plt.ylabel("Price")
plt.show()
```



In [ ]:
```

```