Linear regression

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MAchien learning

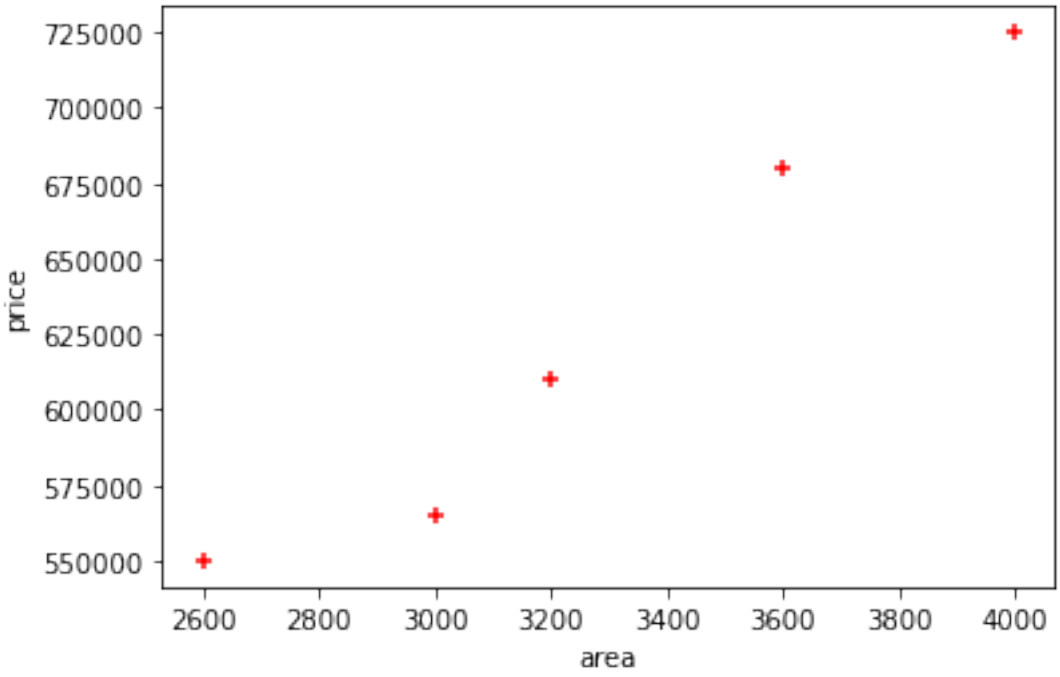
[103]:
```
import pandas as pd
import numpy as np

df=pd.DataFrame({"area":[2600,3000,3200,3600,4000],"price":
  ↪[550000,565000,610000,680000,725000]} )
df
```

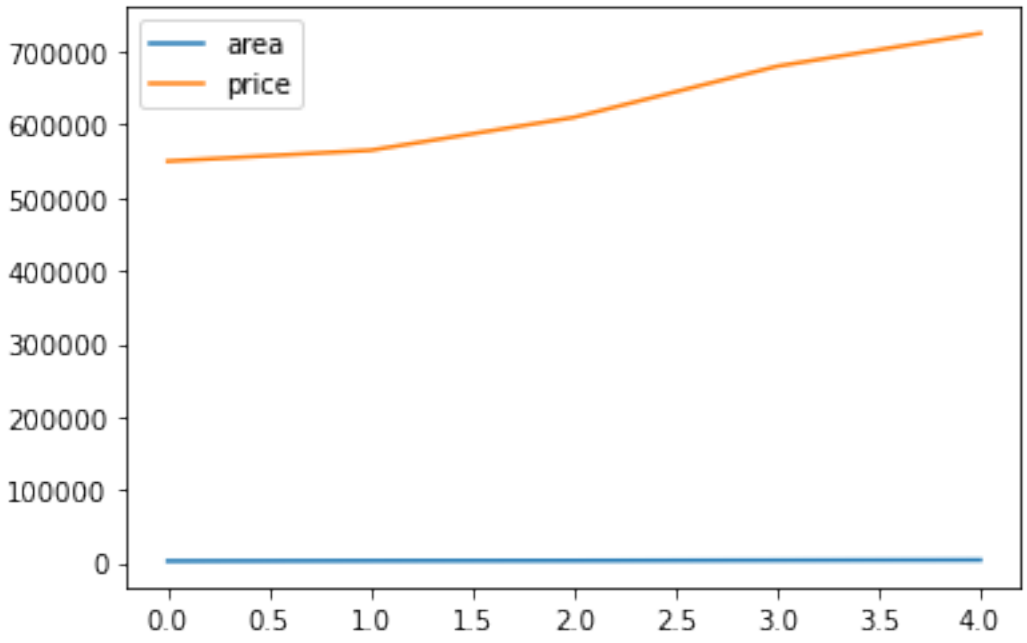
[103]:

	area	price
0	2600	550000
1	3000	565000
2	3200	610000
3	3600	680000
4	4000	725000

[104]:
```
import matplotlib.pyplot as plt
%matplotlib inline
plt.scatter(df.area,df.price,color='red',marker="+")
plt.xlabel('area')
plt.ylabel('price')
df.plot()
```

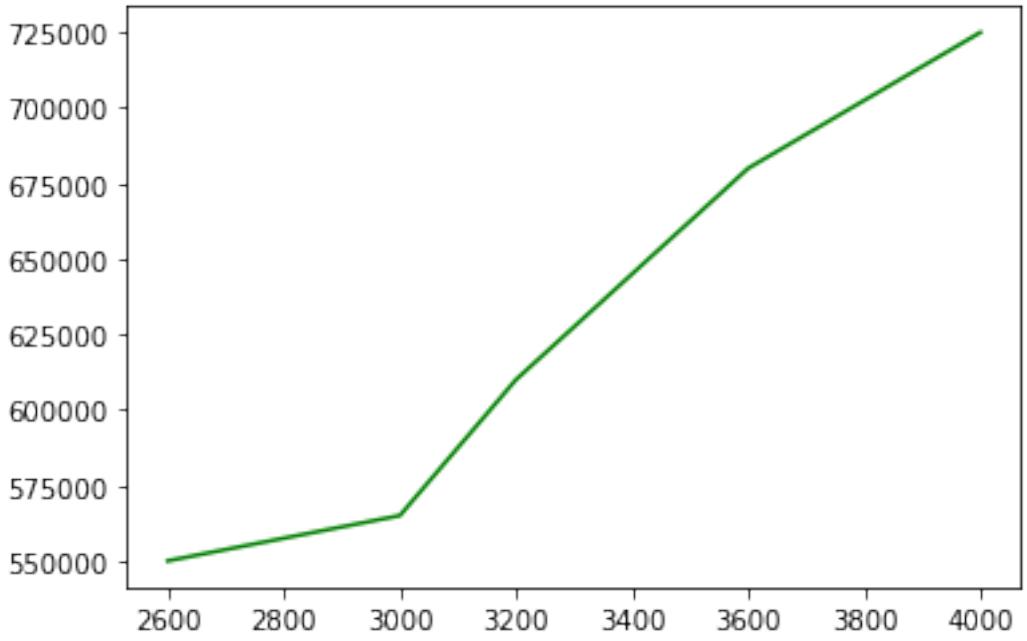
[104]: <AxesSubplot:>





[113]:
```
plt.plot(df.area,df.price,color="green")
```

[113]: [<matplotlib.lines.Line2D at 0x250f7e914c0>]



[106]:
```
from sklearn import linear_model
```

[107]:
```
reg=linear_model.LinearRegression()
reg.fit(df[['area']],df.price)
```

[107]:
```
LinearRegression()
```

[108]:
```
print("c= ",reg.coef_)
print("i= ",reg.intercept_)
```

```
c=  [135.78767123]
i=  180616.43835616432
```

[124]:
```
reg.predict([[3300]])
```

```
C:\Users\Rakesh\anaconda3\lib\site-packages\sklearn\base.py:450: UserWarning: X
does not have valid feature names, but LinearRegression was fitted with feature
names
  warnings.warn(
```

[124]:
```
array([628715.75342466])
```

[ ]:
```

```