linear-regression

March 3, 2024
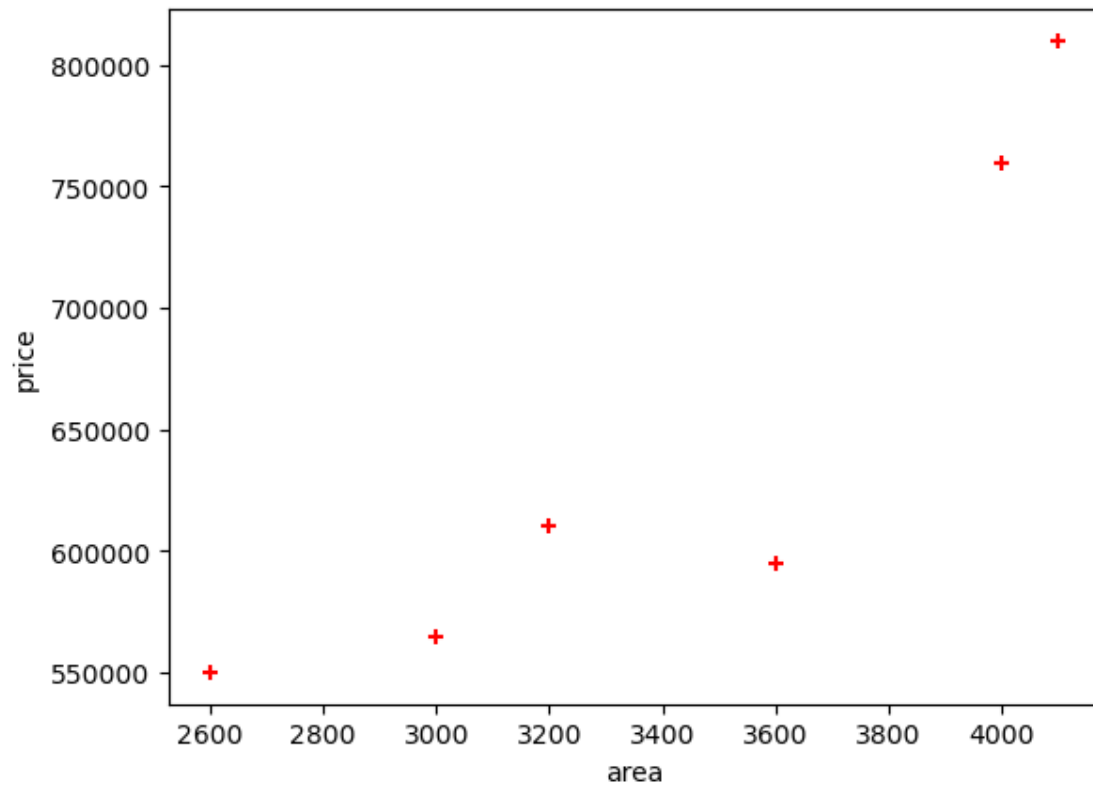
```python
[27]: import numpy as np
      from sklearn import linear_model
      import pandas as pd
      import matplotlib.pyplot as plt
      df= pd.read_csv("D:\homeprices.csv")
      df.head()
```

```
[27]:    area  bedrooms  age   price
      0  2600       3.0   20  550000
      1  3000       4.0   15  565000
      2  3200       NaN   18  610000
      3  3600       3.0   30  595000
      4  4000       5.0    8  760000
```

```python
[23]: plt.xlabel('area')
      plt.ylabel('price')
      plt.scatter(df.area,df.price,color='red',marker='+')
```

```
[23]: <matplotlib.collections.PathCollection at 0x1f1a977c290>
```

price

area

```
[24]: df.drop(df.columns[[1,2]],axis=1,inplace= True)
      df
```

```
[24]:    area    price
      0  2600  550000
      1  3000  565000
      2  3200  610000
      3  3600  595000
      4  4000  760000
      5  4100  810000
```

```
[25]: new_df=df.drop('price',axis='columns')
      new_df
```

```
[25]:    area
      0  2600
      1  3000
      2  3200
      3  3600
      4  4000
      5  4100
```

```
[16]: price = df.price
      price
```

```
[16]: 0    550000
      1    565000
      2    610000
      3    595000
      4    760000
      5    810000
      Name: price, dtype: int64
```

```
[28]: reg=linear_model.LinearRegression()
      reg.fit(new_df,price)
```

```
[28]: LinearRegression()
```

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

D:\anaconda\Lib\site-packages\sklearn\base.py:464: UserWarning: X does not have
valid feature names, but LinearRegression was fitted with feature names
  warnings.warn(

```
[29]: array([628813.88621022])
```

```
[31]: reg.predict([[3400]])
```

D:\anaconda\Lib\site-packages\sklearn\base.py:464: UserWarning: X does not have
valid feature names, but LinearRegression was fitted with feature names
  warnings.warn(

```
[31]: array([645544.84088717])
```

```
[32]: reg.predict([[3500]])
```

D:\anaconda\Lib\site-packages\sklearn\base.py:464: UserWarning: X does not have
valid feature names, but LinearRegression was fitted with feature names
  warnings.warn(

```
[32]: array([662275.79556413])
```

```
[33]: reg.predict([[3600]])
```

D:\anaconda\Lib\site-packages\sklearn\base.py:464: UserWarning: X does not have
valid feature names, but LinearRegression was fitted with feature names
  warnings.warn(

```
[33]: array([679006.75024108])
```

[ ]:

[ ]: