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Experiment 5

1. Create a linear regression model for salary dataset.

In [64]:

```
import pandas as pd
import matplotlib.pyplot as plt
from sklearn import linear_model
```

In [65]:

```
df = pd.read_csv("salary_data.csv")
df.head()
```

Out[65]:

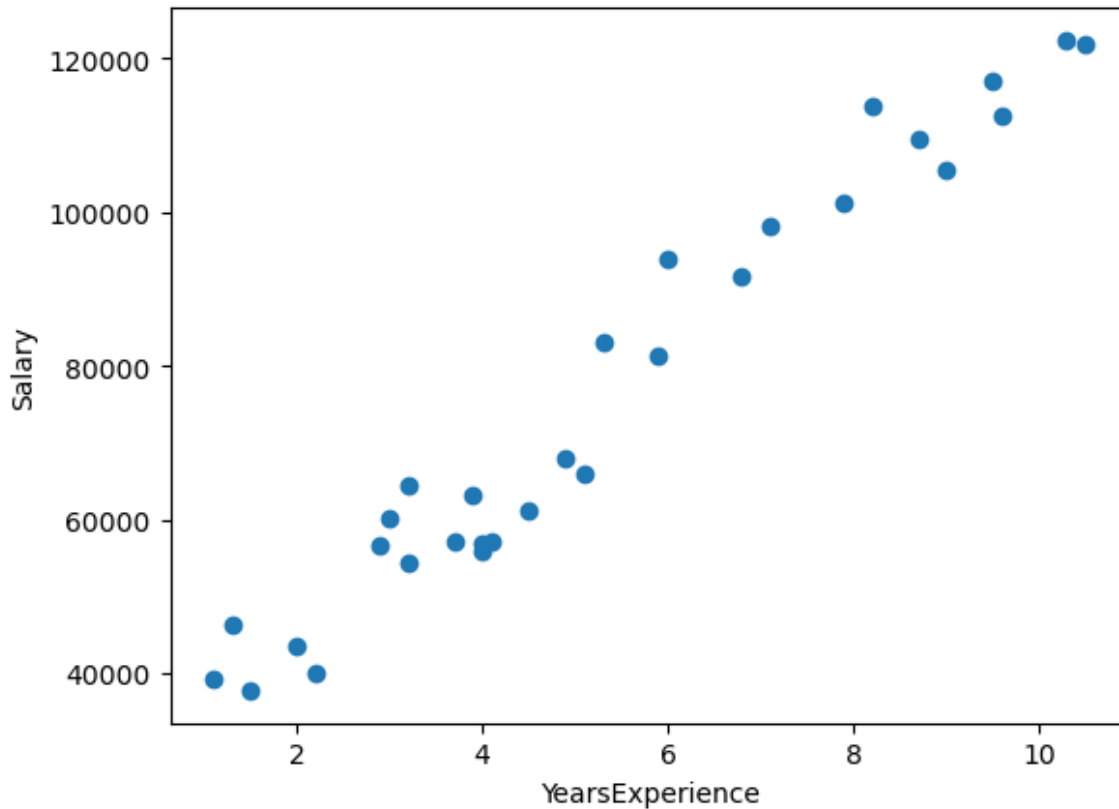
	YearsExperience	Salary
0	1.1	39343.0
1	1.3	46205.0
2	1.5	37731.0
3	2.0	43525.0
4	2.2	39891.0

In [66]:

```
pt.xlabel("YearsExperience")
pt.ylabel("Salary")
pt.scatter(df.YearsExperience,df.Salary)
```

Out[66]:

<matplotlib.collections.PathCollection at 0x23f9e49e100>



In [67]:

```
new_df = df.drop('Salary',axis='columns')
new_df.head()
```

Out[67]:

	YearsExperience
0	1.1
1	1.3
2	1.5
3	2.0
4	2.2

In [68]:

```
model = linear_model.LinearRegression()
```

In [69]:

```
model.fit(new_df,df.Salary)
```

Out[69]:

```
LinearRegression()
```

In [70]:

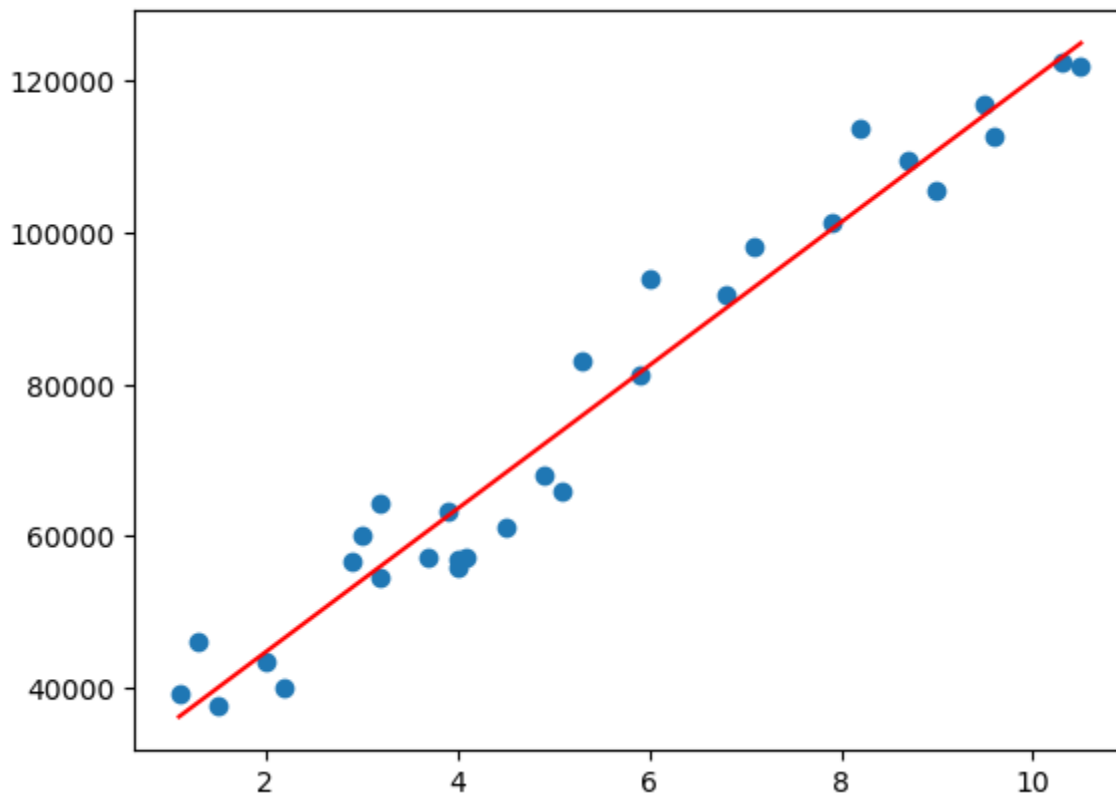
```
prediction = model.predict(new_df)
```

In [71]:

```
pt.scatter(df.YearsExperience,df.Salary)  
pt.plot(df.YearsExperience,prediction,color="red")
```

Out[71]:

```
[<matplotlib.lines.Line2D at 0x23f9e6f3820>]
```



2. Create a linear regression model for house dataset

In [72]:

```
import pandas as pd  
import matplotlib.pyplot as plt  
from sklearn import linear_model
```

In [73]:

```
df = pd.read_csv("house.csv")  
df.head()
```

Out[73]:

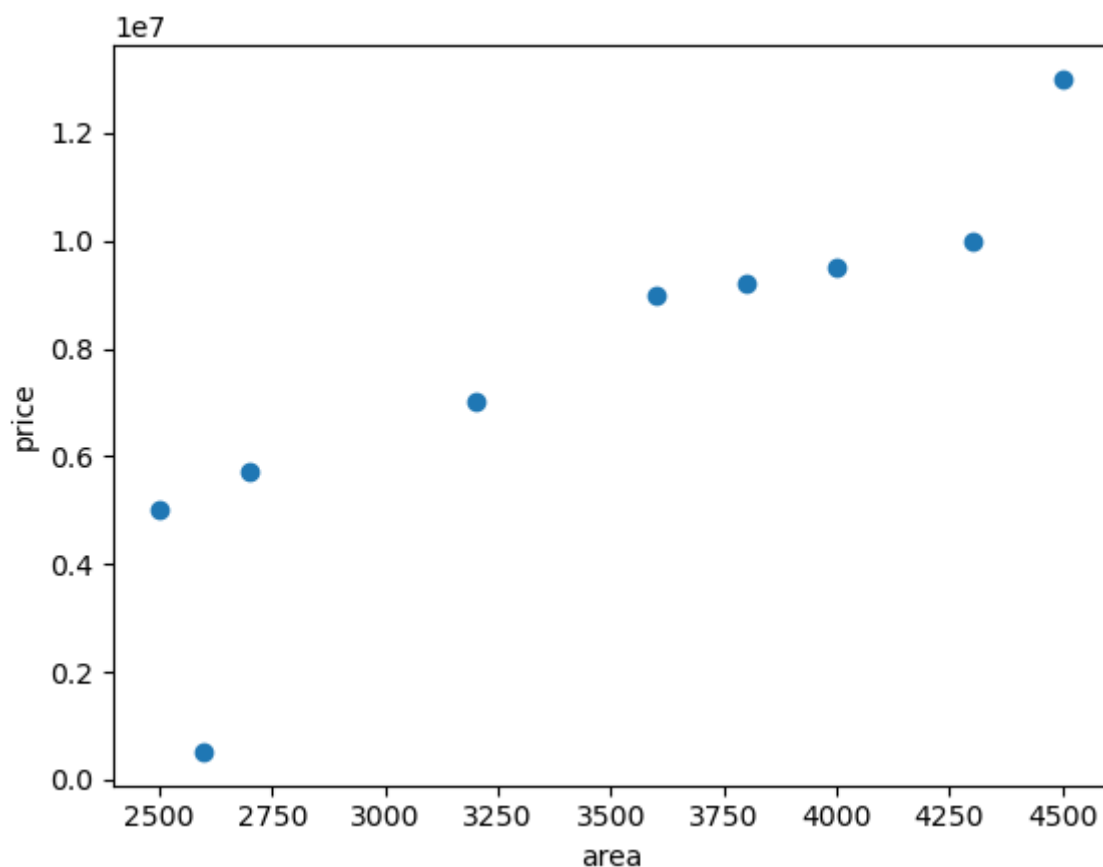
	area	price
0	2500	5000000
1	2600	520000
2	2700	5700000
3	3200	7000000
4	3600	9000000

In [74]:

```
pt.xlabel("area")  
pt.ylabel("price")  
pt.scatter(df.area,df.price)
```

Out[74]:

<matplotlib.collections.PathCollection at 0x23f9e81ff70>



In [75]:

```
new_df = df.drop('price',axis='columns')  
new_df.head()
```

Out[75]:

	area
0	2500
1	2600
2	2700
3	3200
4	3600

In [76]:

```
model = linear_model.LinearRegression()
```

In [77]:

```
model.fit(new_df,df.price)
```

Out[77]:

LinearRegression()

In [78]:

```
prediction = model.predict(new_df)
```

In [79]:

```
pt.scatter(df.area,df.price)  
pt.plot(df.area,prediction,color="red")
```

Out[79]:

[<matplotlib.lines.Line2D at 0x23f9e205640>]

