uixry3p4w

January 23, 2025

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```
import numpy as np
import matplotlib.pyplot as plt
from sklearn import datasets, linear_model
from sklearn.metrics import mean_squared_error
```

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```
#Fetching data
Cali_X,Cali_y =datasets.fetch_california_housing(return_X_y=True)
```

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```
Cali_X=Cali_X[:,np.newaxis,2] #slicing the dataset
```

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```
#slicing train and test data
Cali_X_train=Cali_X[:-20]
Cali_X_test=Cali_X[-20:]
Cali_y_train= Cali_y[:-20]
Cali_y_test=Cali_y[-20:]
```

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```
#Linear Regression model
regression=linear_model.LinearRegression()
regression.fit(Cali_X_train,Cali_y_train)
```

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```
LinearRegression()
```

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```
Cali_y_pred=regression.predict(Cali_X_test)
```

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```
print("Weight: ",regression.coef_)
```

```
Weight:  [0.07093976]
```

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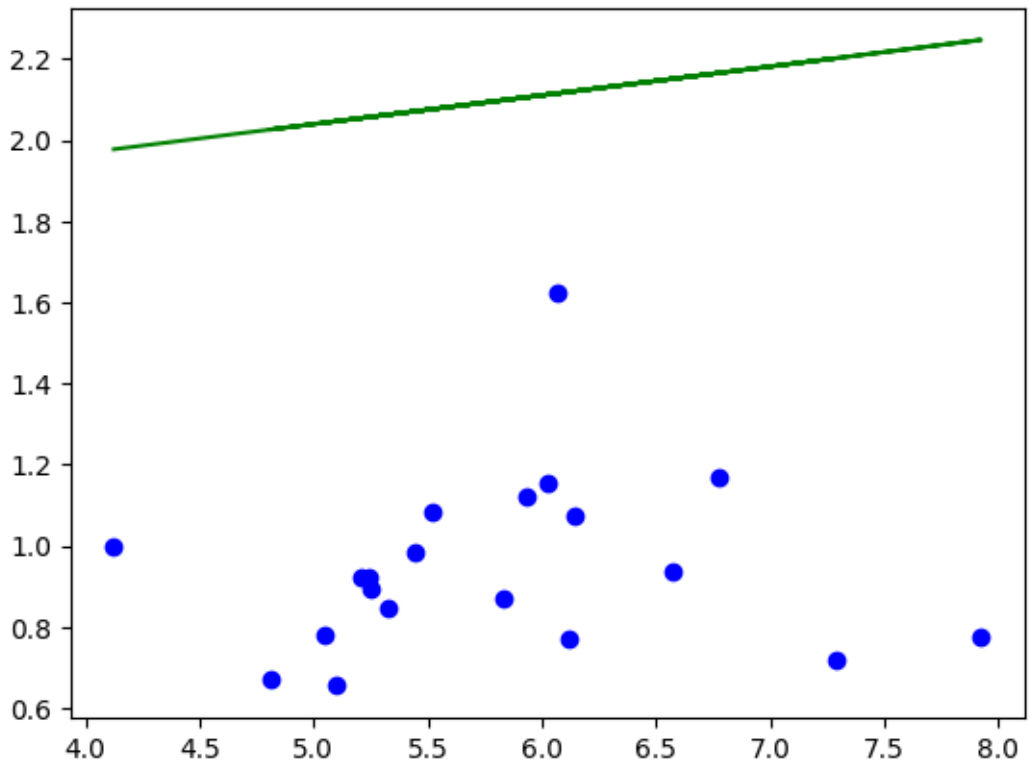
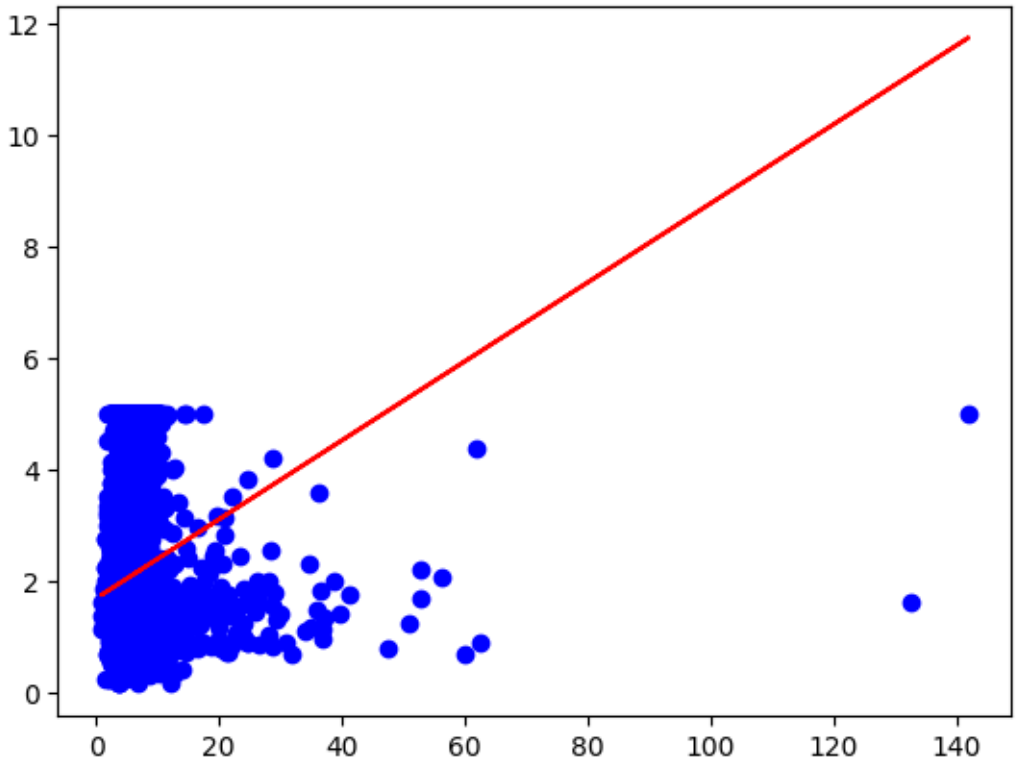
```
#checcking on test data
plt.scatter(Cali_X_test,Cali_y_test,color="blue")
plt.plot(Cali_X_test,Cali_y_pred,color="green")
plt.show()
```



[ ]:
```
#checking on train data
Cali_y_pred=regression.predict(Cali_X_train)
plt.scatter(Cali_X_train,Cali_y_train,color="blue")
plt.plot(Cali_X_train,Cali_y_pred,color="red")
plt.show()
```


12
10
8
6
4
2
0
0
20
40
60
80
100
120
140

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