

ML4

May 23, 2022

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[1]: # Apply Linear Regression technique to solve the given problem.
# The following table shows the results of a recently conducted study on the
    ↳ correlation of the number of hours spent
# driving with the risk of developing acute backache.
# Find the equation of the best fit line for this data.
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[2]: import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
from sklearn.linear_model import LinearRegression
```

```
[22]: df = np.array([[10,95],[9,80],[2,10],[15,50],[10,45],[16,98],[11,38],[16,93]])

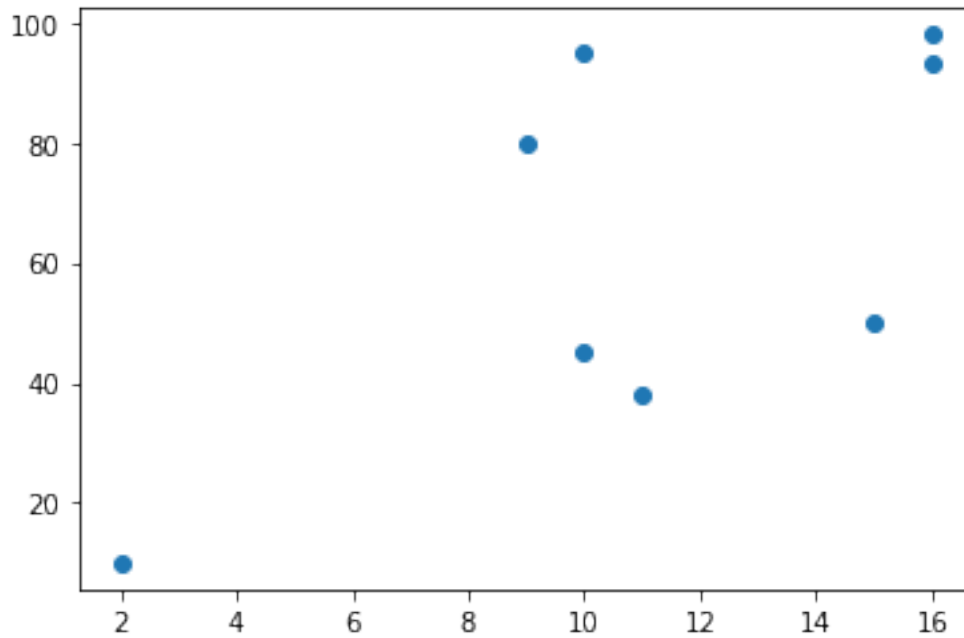
# df = pd.DataFrame(dataset)
```

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[24]: X = df[:,0]
y = df[:,1]

# X = df.iloc[:,0]
# y = df.iloc[:,1]
```

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[25]: plt.scatter(X,y)
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[25]: <matplotlib.collections.PathCollection at 0x1e32ba8a280>
```



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[28]: X = X.reshape(-1, 1)
```

```
[29]: lr = LinearRegression()  
lr.fit(X,y)
```

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[29]: LinearRegression()
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[30]: # Accuracy  
lr.score(X,y)
```

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[30]: 0.43709481451010035
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[31]: lr.coef_
```

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[31]: array([4.58789861])
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[32]: lr.intercept_
```

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[32]: 12.584627964022907
```

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[ ]:
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