Name of the Expt:

Name:- Mangesh T. Gite B.E. (A) Roll no:- 46

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* Assignment - 01 *

Aim :-

Implement simple linear regression on given problem.

Problem Definition :-

The following table shows the result of a recently conducted study on the correlation of the no. of hours spend driving with the risk of developing acute backache Find the equation of the best fit line for this data.

Number of hours spend driving (x)	Risk score on a scale of 0-100 (Y)
10	95
9	80
2	10
15	50
10	45
16	98
11	38
16	93

Input :- CSV Dataset

Outcomes :- After completion of this assignment we are able to understand the how to find the correlation b/w two variable, how to calculate accuracy of the linear model & how to plot graph using matplotlib.

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- Theory :-

Linear Regression :- Regression analysis is used in satats to find trends in data.

Linear regression is a regression model that estimates the relationship blw one independent variable & one dependent variable using a straight line. Both variables should be quantitive.

- Algorithm :-

1) Import the required packages.
2) Read given dataset.
3) Import the linear regression & create object of it.
4) Find the accuracy of model using score function
5) Predict the value using regressor object.
6) Take input from user.
7) Calculate the value of y.
8) Draw a scatter plot.

- Linear Regression Applications :-

1) Trend lines 2) Economics 3) Finance.
4) Biology 5) Medical researches 6) Forecasting.

- Conclusion :- In this assignment, we learn that to how to find the trend of data using X as independent variable & Y is dependent variable by using linear regression.

- Reference :- - https://tinyurl.com/MLLab-DrBhaskarT.
- machinelearningmastery.com

T. Bhaskar

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