

Assignment Al

Execution Date: 27/01/2021 Submission Dok: 19/05/2021 Mille: Linear Regression

Problem Statement: The following table shows The results of a recently conducted

stredy on the corelation of the number of hours spent driving with the prisk of vereloping acute buckache. Find the equotion of the best lift line for this data.

No. of hours spent Risk score on a

driving (a) scale ut 100 (4) 95 10

80

2

15 1,503 45 10

38

16

Outcome:

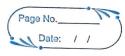
Objective: To understand and implement linear regression algorithm.



Outcome:
Will be able to understand how to find correlation
between The variables and how to calculate accuracy of
The linear model.
Software Requirements:
- Jupyler Notebook
- Python 3.85
- 64 bit operating system
Hosdware Requirements:
- Computer with 64 bit processor.
City and the second
Theory:
Reyression analysis is one of the most widely used
stutistical techniques. It estimates relutionship among a
dependent variable and an independent variable,
Linear Regression:
Loust square methodicy ression is the method of predicting
The value of dependent variable y based on the value of
independent variable x.
Ang leux square regression line:
Given the range



	Given the rundom sumple of Observations population
	The least square regression line is estimated by
	y = 50 + 61 m
	where, bo is constant
	b1 is regression coefficient
	n is the value of independent variable
	y is the value of dependent variable.
	to had the selutionship between dependent and independent
	variable we find correlation
	recording to the second of
	The formula to find correlation using peason correlation
	is:
	r= corviance (n,y)
	sd(n). sd(y)
	where, s.d. = stundard deviation.
	We know the regression model:
	y = b0 + blow
	A STATE OF THE STA
	The formula for bo and bo are:
,	
	67 = 2(x;-7) * (y;-4)
	$57 = 2(x_i - \pi) * (y_i - y_i)$ $2(x_i - \pi)^2$
	60 = y - bix
	1



Best line:

The best line is a straight line the represents the of the points or off of the points or none Algoriam: - Imposit required packages - Read giren dutwet - Import the linear regression and create object of it r Find accuracy of model using score function - Redict De value using segrenor object.

-Take input from user - Calculate value of y

Conclusion: Thus, we learned to had the trend of data by using X as independent variable and y as dependent violable

by using linear regression.