

Experiment No! 3

	<u>!</u>
ashanz	Aimail Implement is simple linear regression using
	Aim in Implement is simple linear regression using analytical it and machine learning without using sklearn.
	Sklearn.
	$d + y_{R} = 'Y$
	Theory:
20 hot	elusion ed nos d bos os 76 eules est.
_	A simple line of management is a time of management
	algorithms that models the relationship
	algorithms that models the relationship between a dependent variable and one independent variable.
•	The relationship shown by sing simple linear
	Regression model is linear or a sloped straight
	line, hence it is called Simple Linear
20	- Regressiontes est relianos (. p.o rol -
•	The key point in simple linear regression is
	that dependent variable must be continuous!
	real valué.
-	However, indépendent variablé an be measured
-0-	on continuous or categorical values.
•	The regression line is represented using
	the following equation,
	10/0/
	y' = ax + b + e
29 50	1 polosoxfor att of notherpa ant -
•	In the above equation I represents the
	predicted value, a réprésents in a slope of
	the line, b shows the Y Intercept and
	e is the random error.



2 fold bourning dx

, jan	Here, we assume the mean value of randon error is of so the equation becomes,
ne in a	herror ising le so hater becomes
	.0,09172
	y' = ax + b
	The value of a and b can be calculated as-
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Jash next	beingen a depende(X:X) variables and one ind.
1	between a dependent variable
1 P P P P	Repression model is linear as a stopped s
Moiort	2 begals of a cold of the same and
	line, hence it is called Simple linear
•	For over the state of the same
71	for e.g., consider the setuiofordata as
1 2 10 01	that dependent variable must be continued
1000	- Hoveron independent variable on Xe meat
o ni	
A.,	
	Total 6 3 11 14
	Brd + Xp = Y
6]	P
c+ 1	The equation for the regression line is,
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	none mehapo atto si s
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II	



$$\therefore a = \underbrace{n \cdot z \times y}_{n \cdot z \times^2} - \underbrace{z \times \cdot z y}_{z \times y}$$

$$\therefore b = \int_{\Omega} \left(\sum Y - \alpha X \sum X \right)$$

$$= \frac{1}{3} (3 - 0.807 \times 4)$$

- Now, the equation for the line becomes,

(A) My