# LINEAR REGRESSION

Linear regression analysis is **used to predict the value of a variable based on the value of another variable**. The variable you want to predict is called the dependent variable. The variable you are using to predict the other variable's value is called the independent variable. Linear regression fits a straight line or surface that minimizes the discrepancies between predicted and actual output values.

Why linear regression is important?

Linear-regression models are relatively simple and provide an easy-to-interpret mathematical formula that can generate predictions. Linear regression can be applied to various areas in business and academic study.
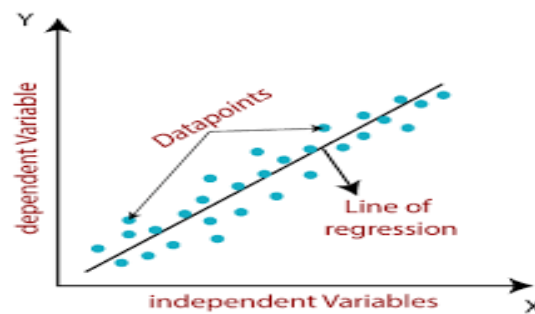
Fig(1)

It is an AI calculation dependent on administered learning. It plays out a relapse task. It is utilized to assess genuine qualities (cost of cars, number of customers, absolute deals and so forth) in view of nonstop variable(s).

Here, we set up connection among free and ward factors by fitting a best line. This best fit line is known as relapse line and spoke to by a straight condition Y= a *X + b.

Prior to understanding what direct relapse is, let us get ourselves acclimated with relapse. Relapse is a strategy for demonstrating an objective worth dependent on free indicators. This strategy is generally utilized for spreading and discovering circumstances and logical results connection between factors. Relapse methods generally vary dependent on the quantity of autonomous factors.

In fig(1) it is very clear how the linear regression algorithm will work.