*Regression Analysis.*

It is a Statistical method used to examine the relation between 1 dependent variable & one or more in independent variable.

The goal of Regression analysis is to understand how the dependent variable (y)

changes when 1 or more independent variables are altered. & to create a model that can predict the value of dependent variable based on values of independent variables.

E.g: iq ya cgpa mai change kro then lpa mai kya change aarha ,

Iq & cgpa dono mai change karo then Lpa mai kya change aarha

& we do prediction lyk that.

E.g:

Cgpa, iq 🡪 x

Lpa --> y

*Flow of Regression Analysis.*

1. Define research or objective
2. Collect & prepare data
3. Visualize the data
4. Check assumptions (we check assumptions, if assumptions are true then we train the Model

(Remaining)

1. Fit the linear regression model
2. Interpret the Model ( yaha Regression Analysis estimate karte hai )
3. Validate the Model
4. Report Result

***Why ML Problems are Statistical Inference Problems ? [ with Example ]***

*ML -> Supervised Problem hie*

* *Reg & classifi*

*ML algo kya krrha ki ki Sample Data dekhke population pe predict krrhe*

*There are hidden variations that we can’t eliminate*

*Becoz vo possible nahi hai.*

***They are called as irreducable error.***

*Why we do Regression Analysis*