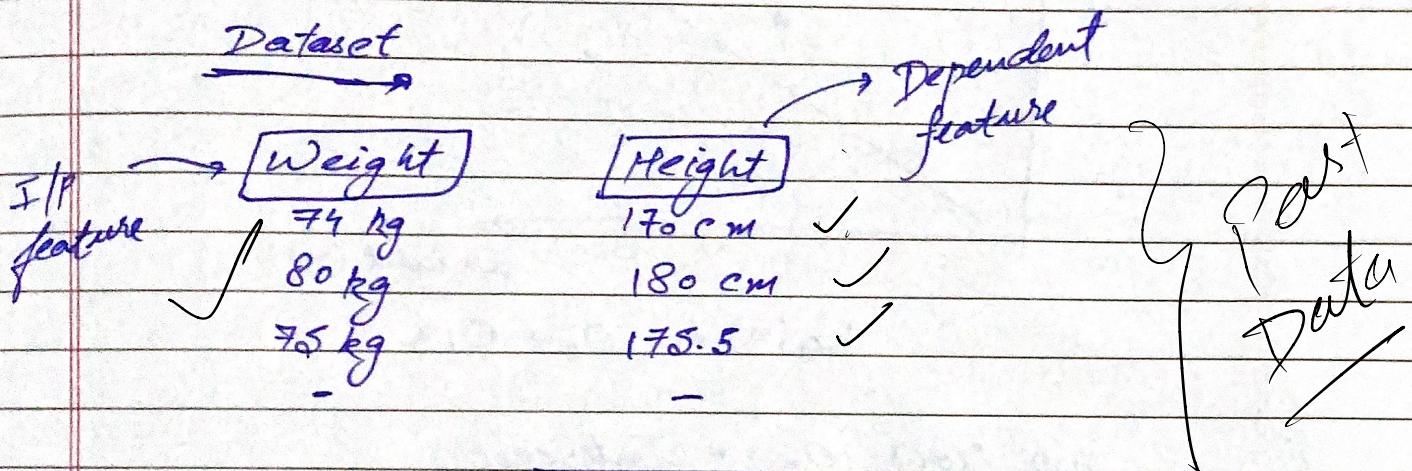


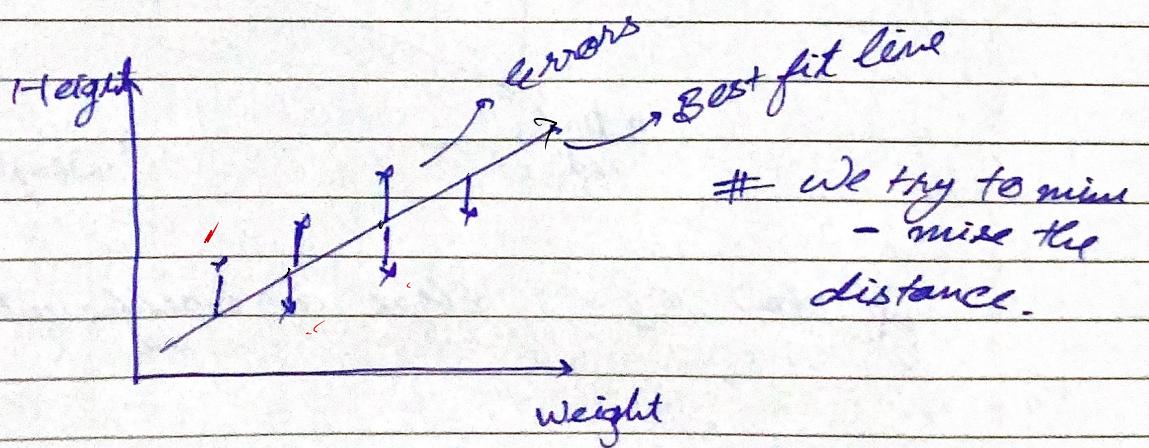
Data Science
Machine Learning
~Somyanush

Simple Linear Regression

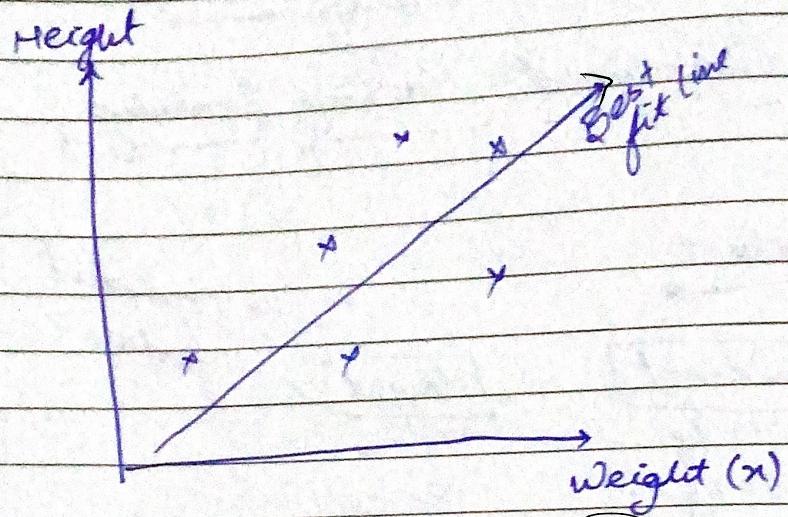
Supervised Machine Learning



New weight → Model → Height
(Training)

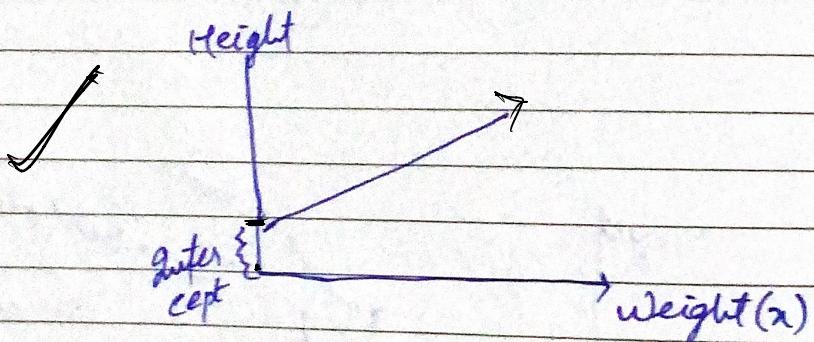


$$y = mx + c$$

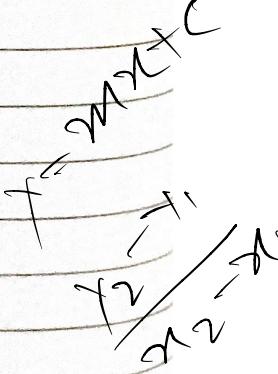
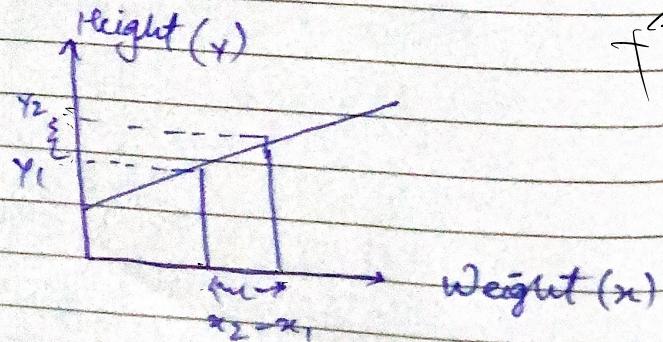


$$h_0(x) = \theta_0 + \theta_1 x$$

~~If~~ New θ_0 = Intercept
~~If~~ $x=0$ then $h_0(x) = \theta_0$



~~If~~ New θ_1 = slope or coefficient



Errors = $y - \hat{y}$ [where \hat{y} = predicted value of y by model]

Now our aim is to minimise the sum of all errors

$$\min \left[\sum (y - \hat{y})^2 \right]$$

$$\hat{y} = y_{\text{predicted}}$$

