Understanding equations related to simple linear regression:

Equation of a straight line:

y = mx + c

y =

x refers to independent feature

is intercept

is slope or coefficient (Unit movement in x axis with respect to unit movement in y axis)

If we have many independent features, then the equation becomes

is the predicted point. Another notion for it is

Error: y -

Aim: To come up with the best fit line such that when we try to calculate the summation of all the errors should be minimal

To find the best fit line, we cannot randomly create lines and keep checking the error. It is not efficient.

Instead, we will create a best fit line and rotate it by changing values of intercept and slope to minimize error.