

## Logistic Regression

- \* Logistic regression approach operates on sigmoid curve rather than a best fit line, we get a value  $\in [0, 1]$  (Binary classification) and then classify into +ve or -ve by comparing with median

Let data points be  $(x_i, y_i)$   $\forall i \in \{0, n\}$

Finding best fit line through previously mentioned methods.

$$v = \frac{1}{1 + e^{-(a_0 + a_1 x + a_2 y)}} + \frac{1}{1 + e^{-(b_0 + b_1 x + b_2 y)}}$$

Classification will be decided on the obtained value  $v$

- \* If  $v < 0.5 \rightarrow$  then "no"
- \* Else ( $v > 0.5$ )  $\rightarrow$  then "yes"

24/3