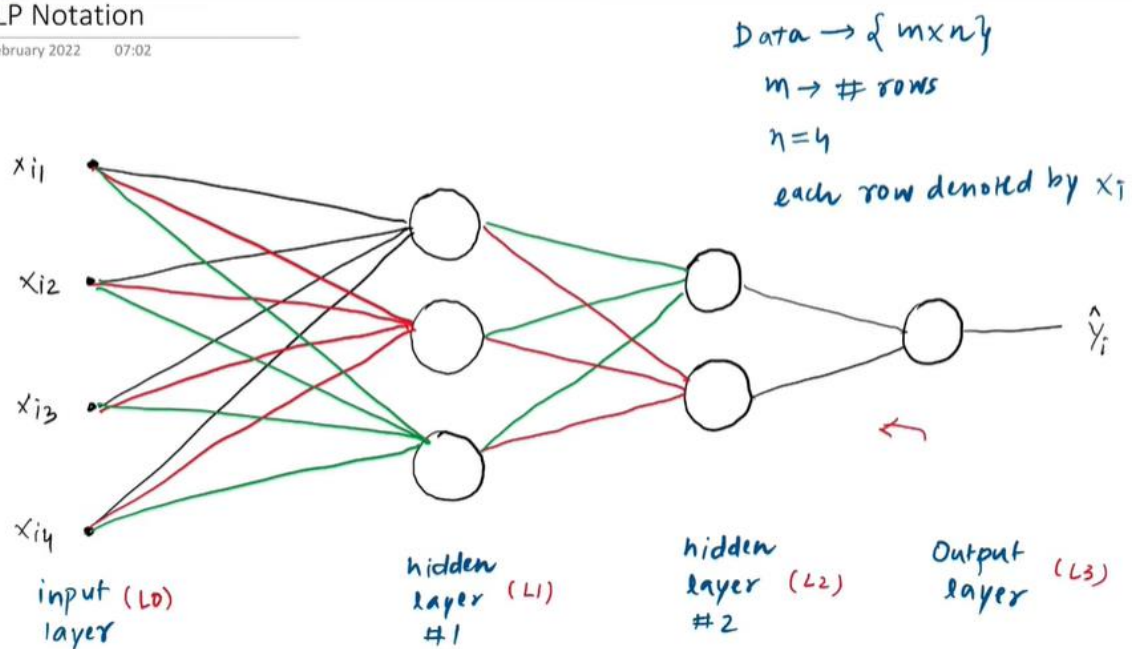


MLP or ANN Notation

MLP Notation

26 February 2022 07:02



Kitne Trainable Parameters hai ?

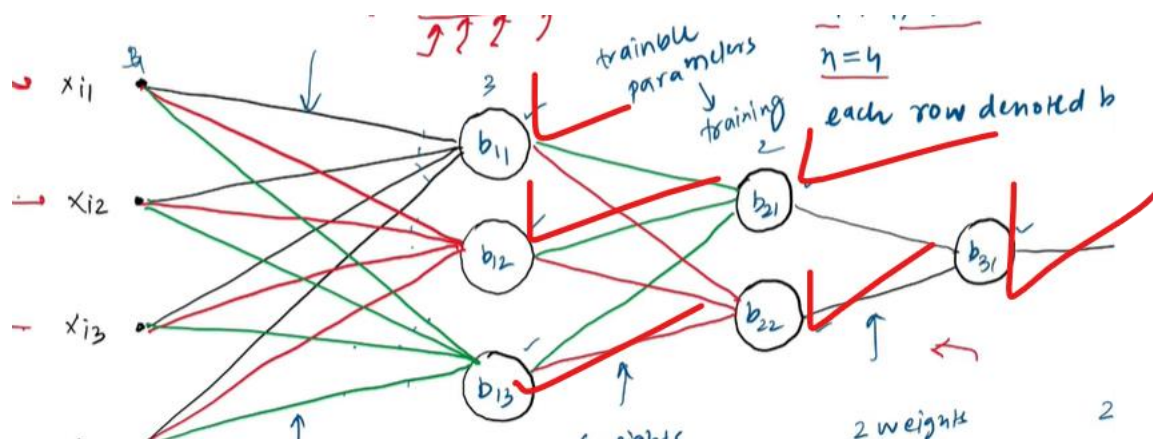
Back Propagation kitne

Bias Notation - B_{ij}

i represents Layer Number

j represents node's number

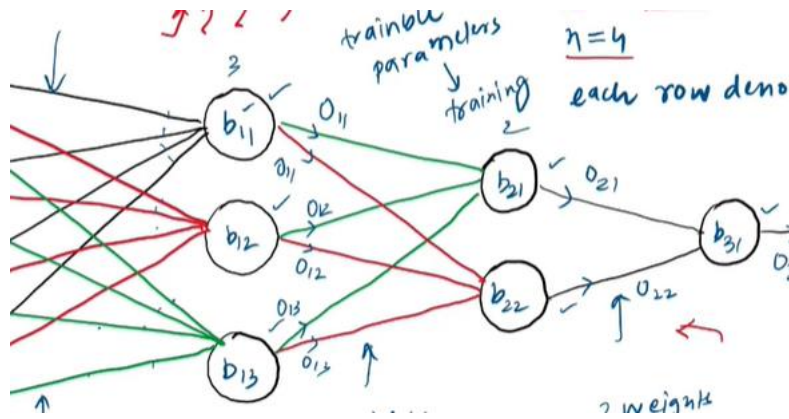
E.g



Output – O_{ij}

i represents Layer Number

j represents node's number

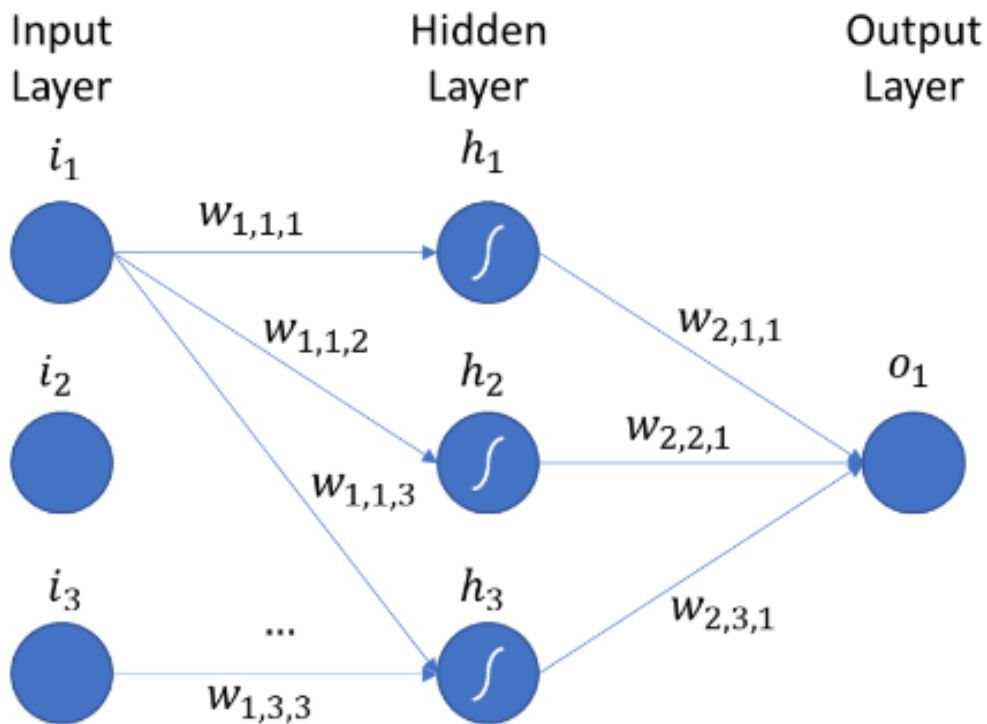


Weights

I -

J - j means jish layer mai ghussraha hai usme kaunse Number of Node pe ghussraha

K - K means weight kaunse layer mai Ghussraha hai



1. Notation for Weights :

Notation: W_{ij}^h

where,

i = From which node weight is passing to the next layer's node.

j = To which node weight is arriving.

h = Layer in which weight is arriving.

Example:

W_{11}^1 = Weight passing into 1st node of 1st layer of 1st node of the previous layer.

W_{23}^1 = Weight passing into the 3rd node of the 1st hidden layer from the 2nd node of the previous layer.

W_{45}^1 = Weight passing into the 5th node of the 2nd hidden layer from the 4th node of the previous layer.

2. Notations for Biases :

Notation: b_{ij}

Where,

i = Layer to which a bias belongs.

j = node to which a bias belongs.

Example:

b_{11} = biases of 1st node of 1st hidden layer.

b_{23} = bias of 3rd of 2nd hidden layer.

b_{41} = bias of 1st node of 4th hidden layer.

3. Notations for Outputs:

Notation: O_{ij}

Where,

i = Layer to which a bias belongs.

j = node to which a bias belongs.

Example:

O_{11} = Output of 1st node of 1st hidden layer.

O_{45} = Output of 5th of 4th hidden layer.

O_{34} = Output of 4th node of 3rd hidden layer

