|  |  |  |
| --- | --- | --- |
| ex | level | Salary1 |
| 1 | 1 | 1 e = 1.2 |
| 2 | 2 | 0 e= 1.2 |
| 3 | 3 | 1 |

C = c!+c2+c3 = 1

W1= 0.2 w2 = 0.3 w3 = 0.3 w4 = 0.4 w5 = 0.6 w6 = 0.7 w7 = 0,8 w8 = 0.9

Activation(x1w1+x2w5) = a(2\*0.1+12\*0.5) = a(0.7) = 0.7

Activation(x1w2+x2w6) = a(1\*0.2+1\*0.6) = a(0.8) = 00.8

Activation(x1w3+x2w7) = a(1\*0.3+1\*0.7) = a(1) = 1

Activation(x1w4+x2w8) = a(1\*0.4+1\*0.8) = a(1.2) = 1.2

w8=0.1 w9=0.2 w10 =0.2 w11= w12 w13 w14 w15 w16 w17 w18 w19 w20 w21 w22 w23 w24

0.7

activation(w9\*0.7+w13\*0.8+w17\*1+1.2\*w21) = a(7.8) =7.8, 9.8, 1.2

activation (w10\*0.7+w14\*0.8+w18\*1+1.2\*w22) = a(9.8 = 7.8,9.

activation (w11\*0.7+w15\*0.8+w19\*1+1.2\*w223) = a(9.7) = 9.7

activation (w12\*0.7+w116\*0.8+w20\*1+1.2\*w24) = (10) = 10

activation(7.8\*w25+9.8\*w26+9.7\*w27+10\*w28) = 0.7 0.8 0.9

soft(0.7 0.8 0.9)

0,0,1

regression = 1/n(y^-y)2

classification

eror = -plog(y)+(1-p)log(1-y)

-1log(0)=(1-1)log(1-0)

Eroor

pred y – actua

error -min

13.8

W1

W2

W3

W4

W5

W6

W7

W8

W9

W10

W11

W12

W13…. W25

4,4 - 16

if op is reg then in op you can either give relu as activation or directly out the values of previous step without activation

if op of dataset is classification then in op layer apply ctivation function as threshold or sigmoid

if op of dataset is categorical then in op layer apply activation function as softmax

error = i/n(y^-v)2 11/2(10-12)2 = 1.2

1,0,0 - ac

0,0,1 -p

Error = categorical cross entropy

eror = -p1log(y1)+(1-p1)log(1-y1) = -p2log(y2)+(1-p2)log(1-y2)- = -p3log(y3)+(1-p3)log(1-y3)

error

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ex | level | apple | bananna | Orange |
| 1 | 1 | 1 | 0 | 0 |
| 2 | 2 | 0 | 1 | 0 |
| 3 | 3 | 0 | 0 | 1 |
| 1 | 1 | 1 | 0 | 0 |
| 2 | 2 | 0 | 1 | 0 |
| 3 | 3 | 0 | 0 | 1 |

Initially – weights will be random

New = old weight – de/doldweight