Nombre:
Materia:
Carrera:
Fecha:

Calificación:

UPS

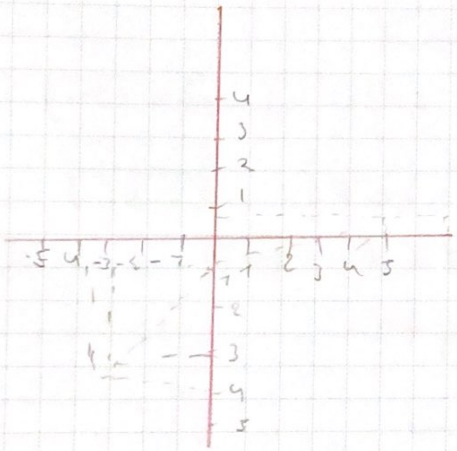
x1	x2	
3.5270	3.2325	0.0
-0.8460	-0,5565	1.0
-2.5275	-3.2922	0.0
4.9.354	0,2361	1.0

Pesos

$w = [\quad]$

$\theta = 0.1194$

$\alpha = 0,7$



Determinar la linea de separación inicial en base a los vectores de pesos y bias dando el problema

$y = F(w_1 x_1 + w_2 x_2 + \theta)$

$x_1 = 0$

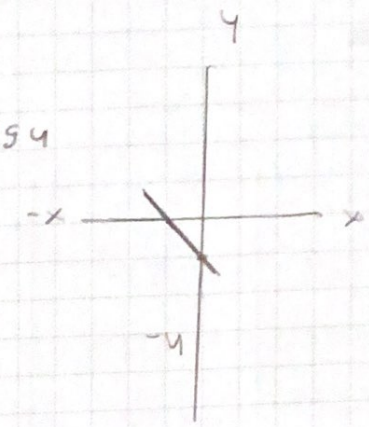
$0 = (0,2500 * 0)(0,1265 + x_2) + 0,1194$

$0 = 0 + 0.1265 x_2 * 0,1194$

$-0.1194 = 0.1265 x_2$

$x_2 = \frac{-0.1194}{0,1265} = 0,943987$

UPS



$x_2 = 0$

$0 = (0{,}2500 * x_1) + (0 + 0.1194$

$0 = 0.2500 x_1 + 0 + 0.1194$

$0 = 0.2500 x_1 + 0.1194$

$x = \frac{0.1194}{0.2500} = 0.4776$

Realizas el proceso de eliminación

$x = [-3{,}5270, -3.2325]$

$y = f(0{,}2500 \; 0{,}1265 \cdot \begin{bmatrix} -3.5270 \\ -3.2325 \end{bmatrix} + 0{,}1194)$

$y = f((-0.8817) + (-0{,}4089) + 0.1194)$

$y = f(-0{,}8677 - 0.4089 + 0.1194)$

$y = -1{,}77$ → $y = 0$

$Error = |-y| = |0 - 0| = 0$

Segunda fila: $x = [-0.8960 \; -0{,}5563]$

$y = f(0 + x_1 + 0)$

$y = f(0{,}2500 \; 0{,}1265 \cdot \begin{bmatrix} -0.8960 \\ -0.5563 \end{bmatrix} + 0.1194)$

$y = f(-0{,}2113) + (-0.1194)$

$y = -0.1624$

$y = 0$

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Actualizar

$w(t+1) = w(t) e \cdot exe$

$w(t+1) = [0,25\ 0,1276] + 0,7 \cdot [-0,8460\ \ -0,3563]$

$= [0,25\ 0,1261] + [0,5922\ \ -0,3855]$

$[-0,3422\ \ -0,26305]$ N

Actualizar

$\theta(t+1) = \theta(t) + \vartheta \cdot e$

$0,1194 \cdot 0,7 \cdot 1 = 0,8194$

Se presenta el tercer patron

$x = [-2.53475\ \ -3,2205]$

y $f(w \cdot x + \theta)$

$y = 1[-0,3422 - 0,26305] \cdot \begin{bmatrix} -2,53475 \\ -3,2205 \end{bmatrix} + 0,8194$

$y = 2,5349 \qquad y = 1$

Actualizar

$w(t+1) = w(t) + \vartheta \cdot e \cdot x$

$[-0,3422\ \ 0,26305] + 0,7 \cdot 1 \cdot [-2,5373\ \ -3,2205]$

$= [0,3422 - 0,26305] + [1,7762\ \ 2,2543]$

$[1,434\ \ 1,9913]$

UPS

* Bao

d (1/2) = a(1) * Sc

0.8194 + 0.7 - 1

0.1194

x = [4.9364 0.2364]

y = f [4.434 1.9915] [4.9364; 0.2364] + 0.1194]

7.0787 + 04.701] + 0.1194

y = 7.60 87

Diner Patron x = [-3.5270 -3.2329]

[1434 1.9915] . [-3.5270; -3.2929] + 0.1194

y = f(-5.0377) (-6.4708)) + 0.1194

y - 11.37

y = 0

Seyn Yap:

x = [+0,8460 0.55(5)

y = f [1,434 1,9915]. [0.8460; 0.5515]

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UPS

Actualizar

w(t+1) = w(t) + s . e . x

= [1.434 1.9915] + 0,7 . 1 [-0.8460 -0.5365]

[1.434 1.9915] + [-0.5922 -0.38955]

[0.8418 1.60]

Bias

(b(t+1)) = b(t) + s e

0.1194 + 0.7 . 1

0.8194 B

// tercer Patron

x [-2,5375 -3.2205]

y F(w x^T = b)

y = F ([0,8418 1.6019] [-2.5375; -3.2205] + 0.8194)

y = F (-2.1360 + (-5.1595)) + 0.8194)

y = F (-2.1360 - 5.1595 + 0.8194)

y = -6.4761

UPS

4to Patron x [4.5354 0.2361]

y = f (w x + b)

y = f (0.8418 1.6019) [4.5354 0.2361] + 0.8194

y = (4.1554 + 0,3787 + 0.8194)

y = 5353

y = 1

1 Patron x = [-3.5270 -3.2395]

y = (0.8418 1.6019) · [-3.5270 -3.2395] + 0.8194

y = (-2.9650 + (-5.7784) + 0.8194)

y = -7.3283

y = 0

2do Patron x [0.8460 0,5555]

y = (0.8418 1.6019) [0.8460 0.5555] + 0.8194

y = (0,7171) (0.8594) + 0.8194)

y = 0.7841 y = 0

Calificación:

Nombre:

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Actualizar

[0,8418   1,6079]

ω (t+1) = ω(t) + ɣ . e . x

[0,8418   1,6079] + 0.7 . 1 . [0.8460 - 0.3565]

[0.8418   1.6079] + [-0.5922 -0.3895]

[0.2496   1.124]

Bias

b(t+1) = b(t) + α . e . 1

= 0.8194 + 0.7 . 1

= 1.5194

3 Patron

x [-2,3375   -3.2205]

(0,296   1.212) [2.3375 / -3.2205] + 1.5194

(-0.665) + (-2.0083) + 1.5194

y = -1.122

4

UPS

4 Pato x [4.9] 64 0.2361]

y f (0,24] 1,2724) $\begin{bmatrix} 4.9 & 64 \\ 0,23 & 61 \end{bmatrix}$ + 1,5154]

y = [1.232 + 0,58 + 1.3154

y = 3.0976 y = 1

1 = [-3.5270 -3.3329]

y f [0,2496 1,2724] $\begin{bmatrix} -3.3270 \\ -3.2329 \end{bmatrix}$ + 15154]

y = f [= 0,8803 + (-3.1597) + (15154)

y = -3,2804 y = 0

Segundo

y [0.8466 - 0.5566]

y [0,2496 1.2724] $\begin{bmatrix} -0.8466 \\ -0.5566 \end{bmatrix}$ + 7.5154

y = 0.63 y = 1

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$f(w_1 x_1 + w_2 x_2 + b)$

$0 = (0.456)(0.12124) x_2 + 1.5194$

$0 = 1.2124 x_2 + 1.5194$

$x = \frac{-1.5194}{1.2124} = -1.2533$

$0 = (0.456) x_1 + (1.2124)(0) + 1.5194$

$0 = 0.2496 x_1 + 0 + 1.5194$

$x = \frac{1.5194}{0.2496} = 6.08$