

ANN2 Assignment

Q2.How you will verify your trained algorithms? Justify your solution

I have verified the trained algorithm by drawing the decision boundary using the trained weights that is the line with equation $w_1 \cdot x_1 + w_2 \cdot x_2 + B_1 = 0$ and $w_3 \cdot x_1 + w_4 \cdot x_2 + B_2 = 0$. This line divides the x-y plane into 3 parts . First $w_1 \cdot x_1 + w_2 \cdot x_2 + B_1 > 0$ and $w_3 \cdot x_1 + w_4 \cdot x_2 + B_2 < 0$ which signifies the class 0 . And the other two parts represents class 1:

1. $w_1 \cdot x_1 + w_2 \cdot x_2 + B_1 > 0$ and $w_3 \cdot x_1 + w_4 \cdot x_2 + B_2 > 0$

2. $w_1 \cdot x_1 + w_2 \cdot x_2 + B_1 < 0$ and $w_3 \cdot x_1 + w_4 \cdot x_2 + B_2 < 0$

X-NOR GATE Line1 : $1.3432437095259768 \cdot x_1 + -1.4022464613613237 \cdot x_2 + -0.682549843354682 = 0$
Line2 : $2.1693873516900717 \cdot x_1 + -2.0688345595685997 \cdot x_2 + 1.1839298404668188 = 0$

