BRSU

Neural Networks
Assignment 2

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1 Read chapter 2 from Haykin's book until 2.13 (leaving out Statistical learning theory to end of chapter) and summarize or sketch your insights in mind-map or an outline or a summary.

2 Design a perceptron that computes the following Boolean function:

2.1 $f(x_1, x_2) = NOT(x_1 AND x_2)$

A single layer perceptron displays a simple linar function. For this problem it looks like:
$STEP(w_1 x_1 + w_2 x_2 + w_0) = y$
For the given functions the following equations have to hold true:
$w_1 + w_2 < -w_0$
$w_1 > -w_0$
$w_2 > -w_0$
$0 > -w_0$

Thisis true for $w_0 = 0.2$, $w_1 = w_2 = -0.15$

2.2 $f(x_1, x_2, x_3) = (x_1 AND x_2) OR x_3$