

HW 5

Perceptron Learning Example - Function AND

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Bias Input x0=+1						Alpha	=	0.5				
Input	Input	Input				Net Sum	Target	Actual	Alpha*	Weight Values		
x0	x1	x2	1.0*w0	x1*w1	x2*w2	Input	Output	Output	Error	w0	w1	w2
			0.5	0	0	0.5	0	1	-0.5	0	0.5	0.5
1	0	1	0	0	0.5	0.5	0	1	-0.5	-0.5	0.5	0
1	1	0	-0.5	0.5	0	0	0	1	-0.5	-1	0	0
1	1	1	1	0	0	-1	1	0	0.5	-0.5	0.5	0.5
1	0	0	-0.5	0	0	-0.5	0	0	0	-0.5	0.5	0.5
1	0	1	-0.5	0	0.5	0	0	1	-0.5	-1	0.5	0
1	1	0	-1	0.5	0	-0.5	0	0	0	-1	0.5	0
1	1	1	-1	0.5	0	-0.5	1	0	0.5	-0.5	1	0.5
1	0	0	-0.5	0	0	-0.5	0	0	0	-0.5	1	0.5
1	0	1	-0.5	0	0.5	0	0	1	-0.5	-1	1	0
1	1	0	-1	1	0	0	0	1	-0.5	-1.5	0.5	0
1	1	1	-1.5	0.5	0	-1	1	0	0.5	-1	1	0.5
1	0	0	-1	0	0	-1	0	0	0	-1	1	0.5
1	0	1	-1	0	0.5	-0.5	0	0	0	-1	1	0.5
1	1	0	-1	1	0	0	0	1	-0.5	-1.5	0.5	0.5
1	1	1	-1.5	0.5	0.5	-0.5	1	0	0.5	-1	1	1
1	0	0	-1	0	0	-1	0	0	0	-1	1	1
1	0	1	-1	0	1	0	0	1	-0.5	-1.5	1	0.5
1	1	0	-1.5	1	0	-0.5	0	0	0	-1.5	1	0.5
1	1	1	-1.5	0.5	0.5	0	1	1	0	-1.5	1	0.5
1	0	0	-1.5	0	0	-1.5	0	0	0	-1.5	1	0.5
1	0	1	-1.5	0.5	0.5	-1	0	0	0	-1.5	1	0.5
1	1	0	-1.5	0	0	-0.5	0	0	0	-1.5	1	0.5
1	1	1	-1.5	0.5	0.5	0	1	1	0	-1.5	1	0.5

$$ACC = \frac{A+0}{A}$$

$$= 1 \rightarrow 1 \times 100 = 100\%$$