

Perceptron based learning

- Linear separation example:

$$S \{((0,2), 1), ((1,1), 1), ((1,2.5), 1), ((2,0), 0), ((3,0.5), 0)\}$$

- Update rule:

- $$w_i = w_i + (c - o)x_i$$

round	w ₀	w ₁	w ₂	Input	$\sum w_i x_i$	o	c	w ₀	w ₁	w ₂
init								0	0	0
1	0	0	0	(1,0,2)	0	0	1	1	0	2
2	1	0	2	(1,1,1)	5	1	1	1	0	2
3	1	0	2	(1,1,2.5)	6	1	1	1	0	2
4	1	0	2	(1,2,0)	1	1	0	0	-2	2
5	0	-2	2	(1,3,0.5)	-5	0	0	0	-2	2
6	0	-2	2	(1,0,2)	4	1	1	0	-2	2
7	0	-2	2	(1,1,1)	0	0	1	1	-1	3