

Ahmad Hujatimalekshah

x_1	x_2	x_3	x_4	y
5.8	4	1.2	0.2	0
5.7	4.4	1.5	0.4	0
6.7	3	5	1.7	1
6	2.9	4.5	1.5	1
5.7	2.6	3.5	1	1
5.5	2.4	3.8	1.1	1
5.5	2.4	3.7	1	1
7.7	3.8	6.7	2.2	0
7.7	2.6	6.9	2.3	0
6	2.2	5	1.5	0

$$w = [w_1, w_2, w_3, w_4]$$

$$y = w^T x + b$$

with buffer

= 1

$$5.8w_1 + 4w_2 + 1.2w_3 + 0.2w_4 + b$$

< -1

$$5.7w_1 + 4.4w_2 + 1.5w_3 + 0.4w_4 + b$$

< -1

$$6.7w_1 + 3w_2 + 5w_3 + 1.7w_4 + b$$

> 1

$$6w_1 + 2.9w_2 + 4.5w_3 + 1.5w_4 + b$$

> 1

$$5.7w_1 + 2.6w_2 + 3.5w_3 + w_4 + b$$

> 1

$$5.5w_1 + 2.4w_2 + 3.8w_3 + 1.1w_4 + b$$

> 1

$$5.5w_1 + 2.4w_2 + 3.7w_3 + w_4 + b$$

> 1

$$7.7w_1 + 3.8w_2 + 6.7w_3 + 2.2w_4 + b$$

< -1

$$7.7w_1 + 2.6w_2 + 6.9w_3 + 2.3w_4 + b$$

< -1

$$6w_1 + 2.2w_2 + 5w_3 + 1.5w_4 + b$$

< -1