

**Winnow Algorithm**

- 1) Use the Winnow Algorithm to find the weight vector based on the data below. Assume that threshold  $\Theta = 4$  and multiplier  $\alpha = 2$  and initially  $w = (1, 1, 1, 1, 1)$ .
- 2) Classify the test instance  $(a_0, a_1, a_2, a_3, a_4) = (1, 1, 1, 0, 1)$ .

ID	a0	a1	a2	a3	a4	class
1	1	1	0	1	0	-1
2	1	0	0	1	0	-1
3	1	1	1	0	1	1
4	1	1	0	1	1	1
5	1	1	1	1	1	1
6	1	0	1	0	0	-1