

	index	Category	Label
[	0	A	1
	1	A	1
	2	A	0
	3	B	1
i	4	A	1
	5	B	

$$i = \text{avg\_label\_value} = \frac{3}{4}$$

$$i = \frac{1 + 1 + 0 + a * \text{prior}}{3 + a}$$