

$$\text{loss} = -\frac{1}{N} \sum_{n=1}^N y_n \log \hat{y}_n + (1-y_n) \log (1-\hat{y}_n)$$

y	y-pred	loss
1	0.7	0.15
1	0.2	0.69
0	0.9	+1
0	0.1	+0.045

N=1

$$1) \quad \frac{-1[(1) \log(0.7) + (1-1) \log(1-0.7)]}{1} = 0.15$$

$$2) \quad \frac{-1[(1) \log(0.2) + (1-1) \log(1-0.2)]}{1} = 0.69$$

$$3) \quad \frac{-1[(0) \log(0.9) + (1-0) \log(1-0.9)]}{1} = +1$$

$$4) \quad \frac{-1[(0) \log(0.1) + (1-0) \log(1-0.1)]}{1} = +0.045$$