

1. Logistic Regression

$$\Rightarrow \ln\left(\frac{P}{1-P}\right) = a + bX$$

↳ derived from probabilistic approach

$$Y = 1 \rightarrow \text{for } P$$

$$Y = 0 \rightarrow \text{for } 1-P$$

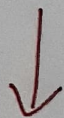
P can also be obtained as

$$P = \frac{\exp(a + bX)}{1 + \exp(a + bX)}$$

to calculate the expected probability for given value of X. for $Y = 1$

2. Naïve Bayes

$$P(c|x) = \frac{P(x|c) P(c)}{P(x)} \rightarrow \text{Prior probability}$$



Posterior probability