

1. Naive bayes

Category Probabilistic classifier.

Applies bayes theorem with strong naive assumption that features are independent.

$P(A|B)$ - probability of A given B true.

$$P(y|x_1, x_2, \dots, x_n) = \frac{P(y)P(x_1, x_2, \dots, x_n | y)}{P(x_1, x_2, \dots, x_n)}$$

Using naive assumption of independence: $P(x_1, x_2, \dots, x_n | y) = \prod P(x_i | y)$

?Why this works? <https://www.cs.unb.ca/~hzhang/publications/FLAIRS04ZhangH.pdf> ?Gaussian Naive Bayes? ?central limit theorem? ?probability vs likelihood? z-score(or standard score) = $\frac{X-M}{\sigma}$

How to deal with continuous features?