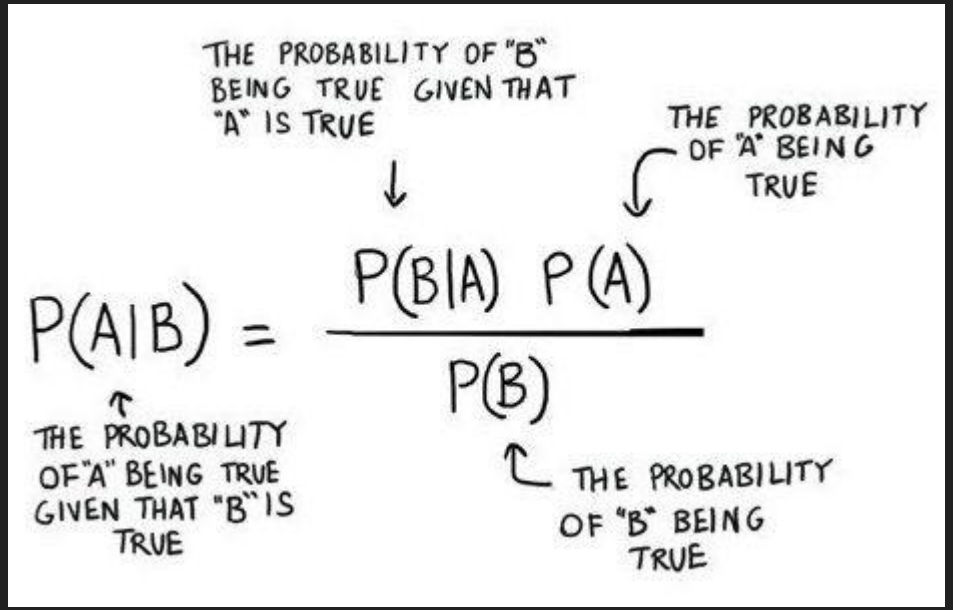
Naive Bayesian Classifier | ML LAB 5

What is Bayes Theorem?



Bayes theorem talks about Conditional probability.

Naive Bayesian Classifier Algorithm

Algorithm:
NaiveBaiseClassifier(training_examples, New_Instance)

Each instance ***x*** is described by a conjunction of attribute values(a_i) and the target V can take j finite set of values.

a. For each value j in target estimate the P(Vj)
b. For each attribute in the training example estimate Estimate the P(ai|Vj)
c. Classify each instance as per the rule in equation

$$v_{NB} = \underset{v_j \in V}{\text{argmax}}\, P(v_j) \prod_i P(a_i|v_j)$$

Where V_{NB} denotes the target value output by the naive Bayes classifier

d. Output V_{NB}