# NAIVE BAYES THEOREM

* Consider an event E with 2 outcomes A and B then initial probabilities are P(A) and P(B) and when we encounter new info with a condition R then their probabilities are P(R|A) and P(R|B)
* The new probabilities are P(a) and P(b) where P(a)=P(A)\*P(R|A)/(P(A)\*P(R|A) + P(B)\*P(R|B)) and P(b)= P(B)\*P(R|B)/(P(A)\*P(R|A) + P(B)\*P(R|B))
* P(A|B)= P(B|A)\*P(A)