ML :-

By Baye's Theorem,

$$P(A|B) = \frac{P(B|A) . P(A)}{P(B)}$$

① $P(\text{sunny}|\text{a cone of ice cream}) = \frac{P(\text{a cone of ice cream}|\text{sunny}) . P(\text{sunny})}{P(\text{a cone of ice cream})}$

$\therefore$ $P(\text{a cone of ice cream}/\text{sunny}) . P(\text{sunny})$

$P(\text{a cone of ice cream}/\text{rainy}) . P(\text{rainy})$

Being Naive :-

$P(\text{a cone of ice cream}) = P(a) . P(\text{cone}) . P(\text{of}) . P(\text{ice}) . P(\text{cream})$

As we want to find bigger probability, we can ignore divisor.

$P(\text{sunny}|\text{a cone of ice cream}) = P(\text{sunny}|a) . P(\text{sunny}|\text{cone}) . P(\text{sunny}|\text{of}) . P(\text{sunny}|\text{ice}) . P(\text{sunny}|\text{cream}) . P(\text{sunny})$

② $P(\text{rainy}|\text{a cup of hot coffee}) = \frac{P(\text{a cup of hot coffee}|\text{rainy}) . P(\text{rainy})}{P(\text{a cup of hot coffee})}$

$\therefore$ $P(\text{a cup of hot coffee}|\text{rainy}) . P(\text{rainy})$

$P(\text{a cup of hot coffee}/\text{sunny}) . P(\text{sunny})$

Being Naive :-

$P(\text{a cup of hot coffee}) = P(a) . P(\text{cup}) . P(\text{of}) . P(\text{hot}) . P(\text{coffee})$

As we want to find bigger probability, we can ignore divisor.

$P(\text{rainy}|\text{a cup of hot coffee}) = P(\text{rainy}|a) . P(\text{rainy}|\text{cup}) . P(\text{rainy}|\text{of}) . P(\text{rainy}|\text{hot}) . P(\text{rainy}|\text{coffee})$