Naive Bayes Algorithm

Probelistic Algorithm to find out the Probability of o/p with given Features.

#Naive → Assumption that all I/ps are independent.

#Bayes → Bayes Theorem of Probability

Spam or Ham

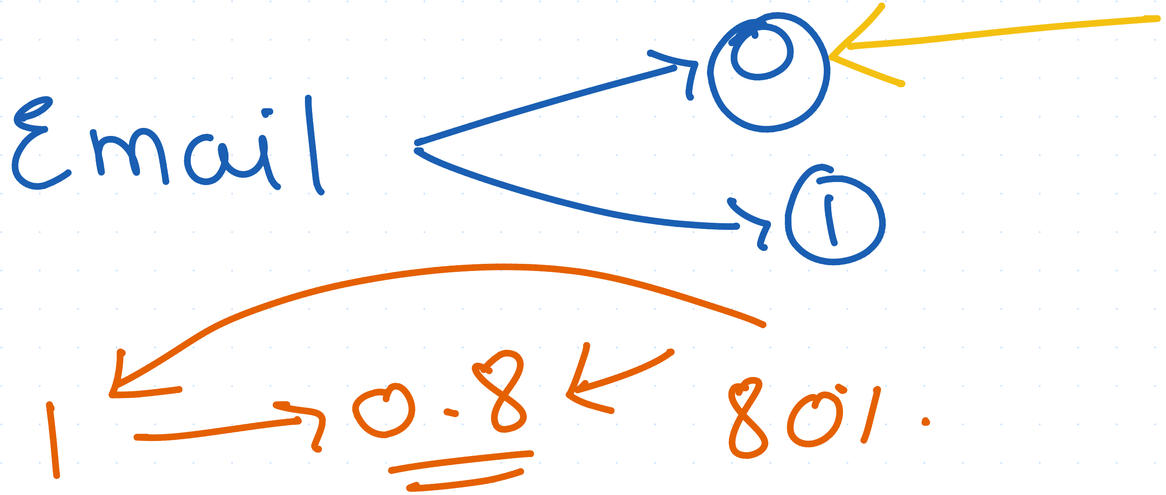
Spam → (0)

Ham → (1)

n

0, 1, 2

2, 0.72



(0, 0.7) 72%. Surity

70%. Surity

0 classes

P(n) →

$$P(H/E) = \frac{P(E/H) * P(H)}{P(E)}$$

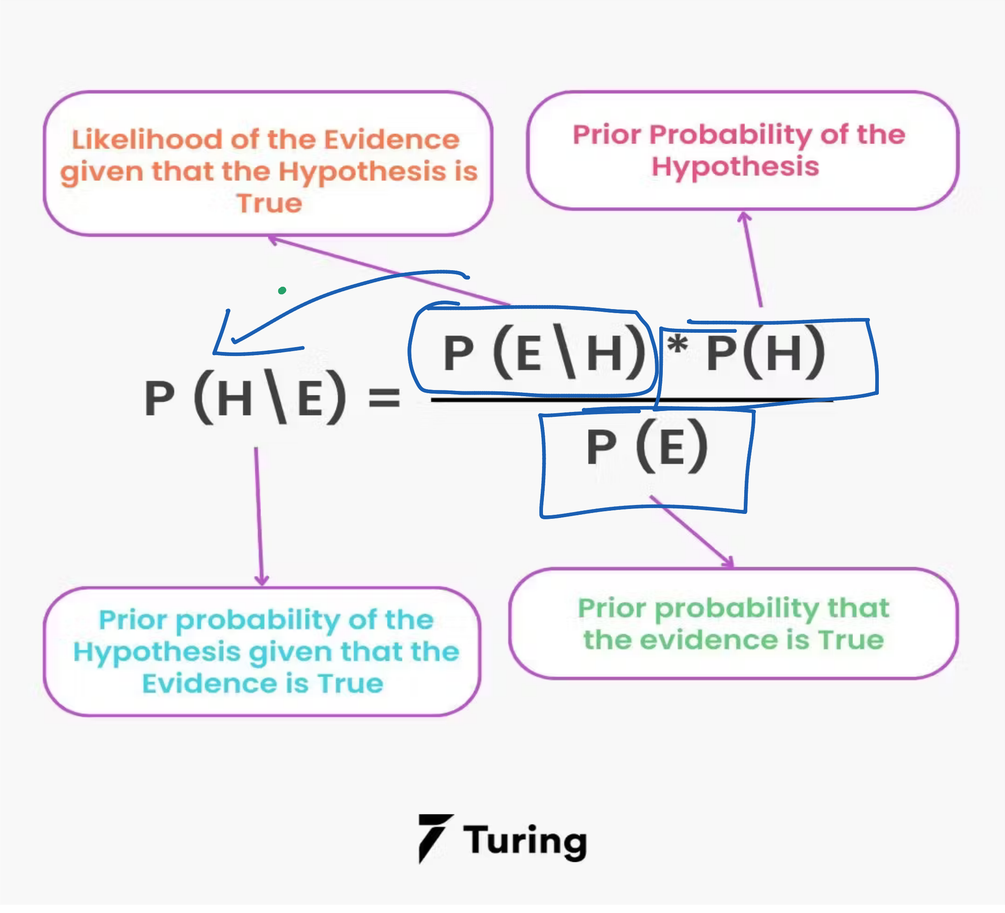
A ⊗ B

Tossing the coin → (10)

T

1/2 , 1/2 → 1/2, 1/2

independent event



Statistics

→ Hypothesis Testing

((ensus Avg income)

a) Null Hypothesis ⟶ 18.2 LPA
Accept

b) Alternate Hypothesis ⟶ != 18.2 LPA
Reject

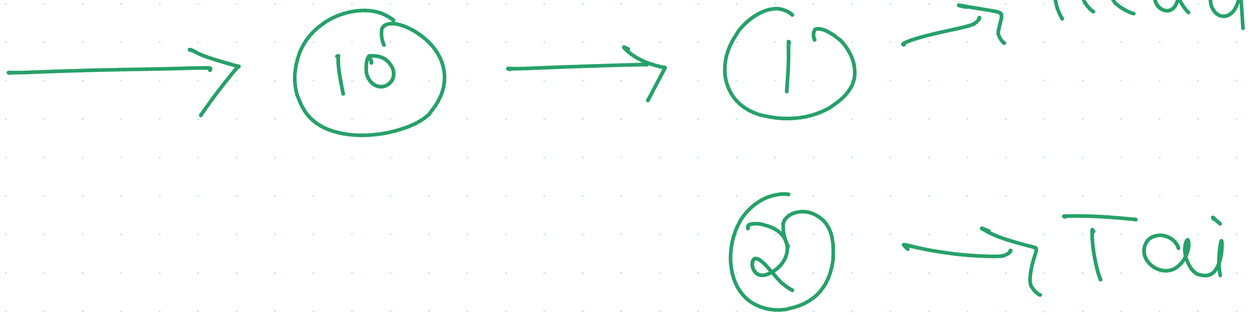
(ANOVA Test, chi Square Test, Z-Test)

P-value

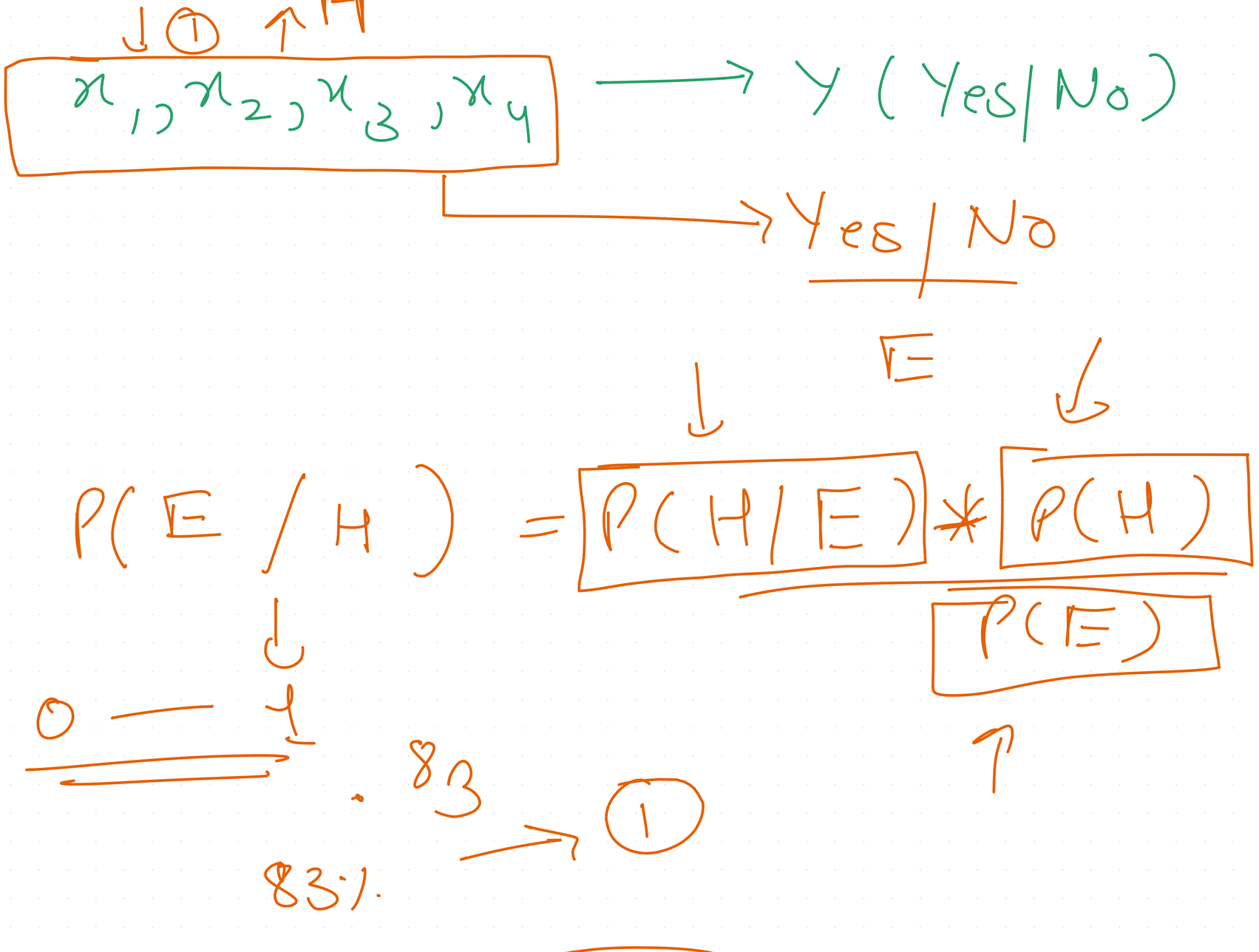
$P(H|E) = (P(E|H) * P(H))/P(E)$

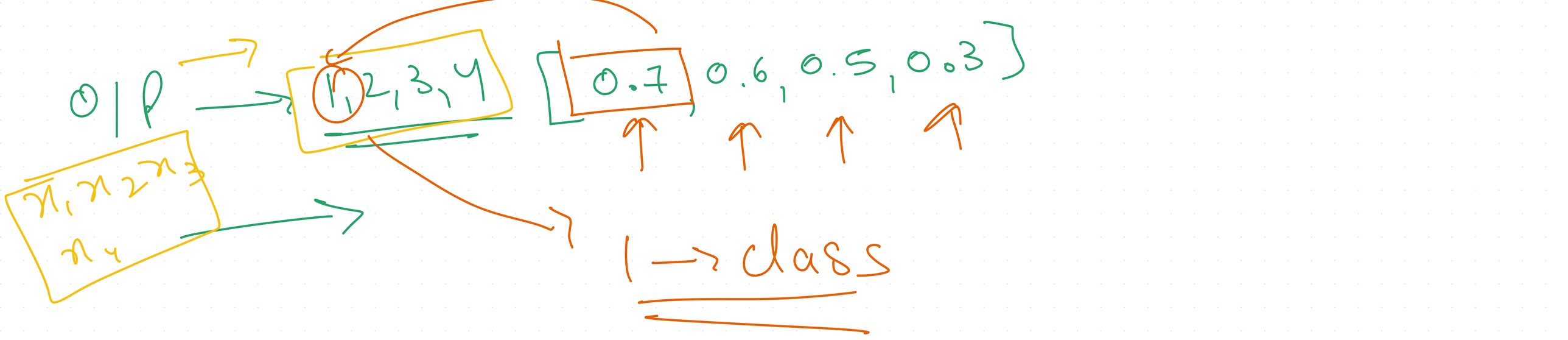
$P(H) \rightarrow 1/2$

$P(T) \rightarrow 1/2$



$$P(T|H) = \frac{P(H|T) * P(H)}{P(E)}$$


x_1, x_2, x_3, x_4
Y (Yes/No)
Yes / No
E
P(E/H) = P(H/E) * P(H) / P(E)
0 — 1
83
83:1.


O/P
1,2,3,4
0.7
0.6, 0.5, 0.3
x1, x2 x3
x4
1 → class