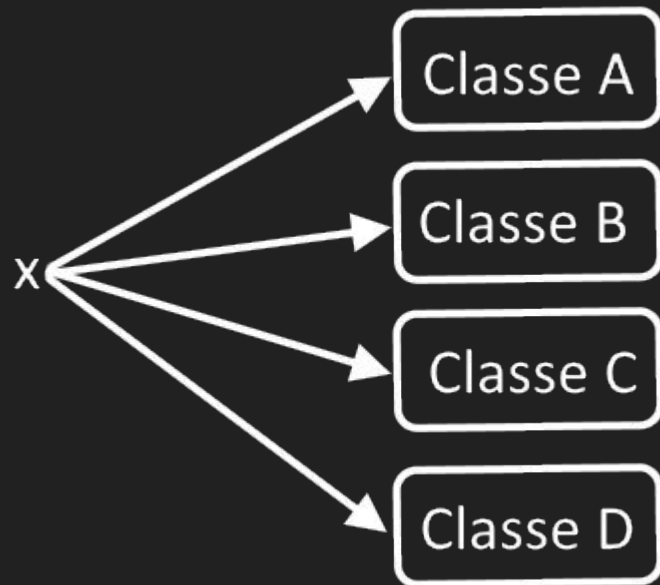
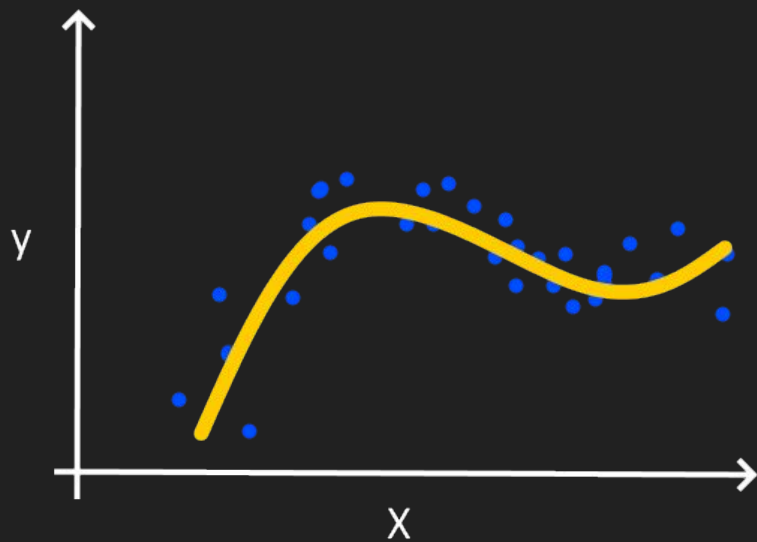


# ARBRES DE DÉCISION

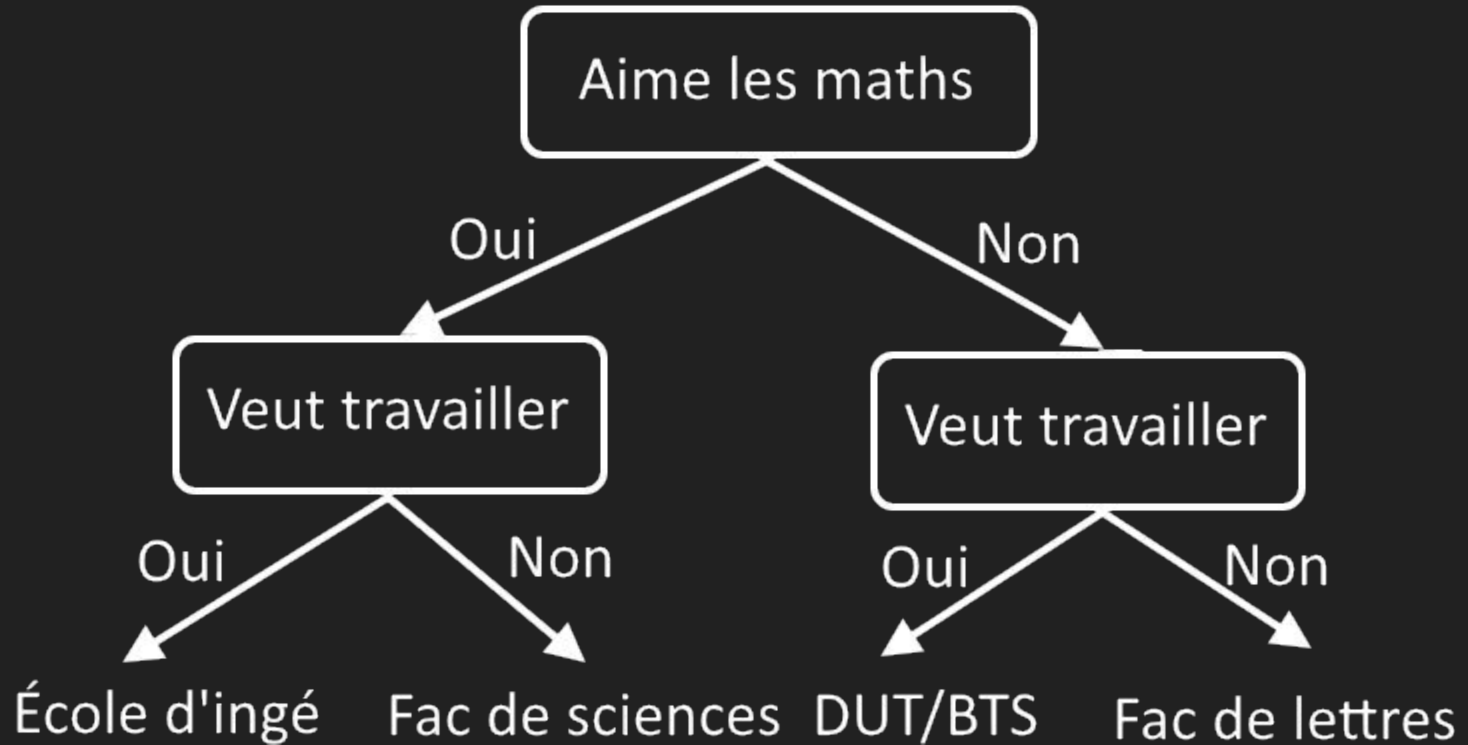


Classification et Régression

# I - Objectif

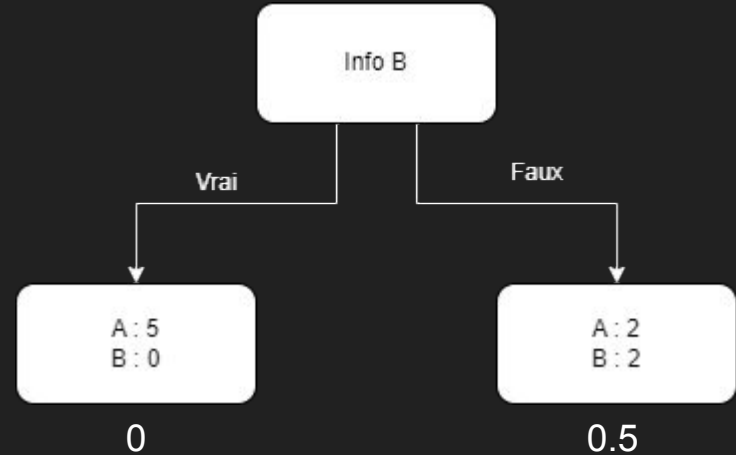
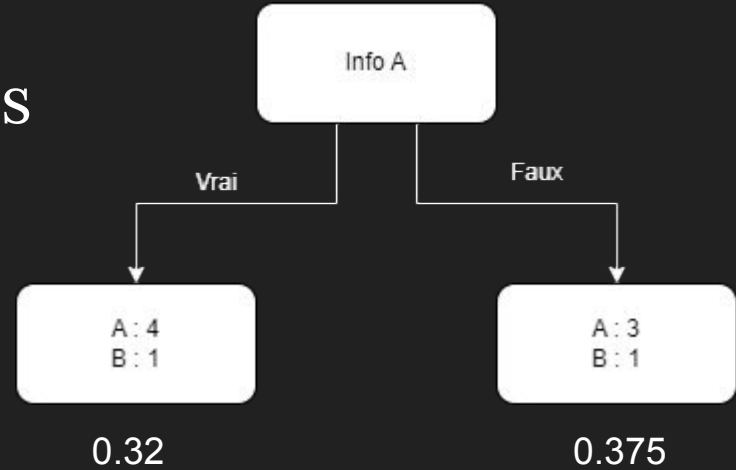


## II - Principe



### III – Construction – Données

Info A	Info B	Résultat
Vrai	Faux	B
Vrai	Vrai	A
Faux	Faux	A
Vrai	Vrai	A
Faux	Vrai	A
Faux	Faux	B
Vrai	Vrai	A
Faux	Vrai	A
Vrai	Faux	A



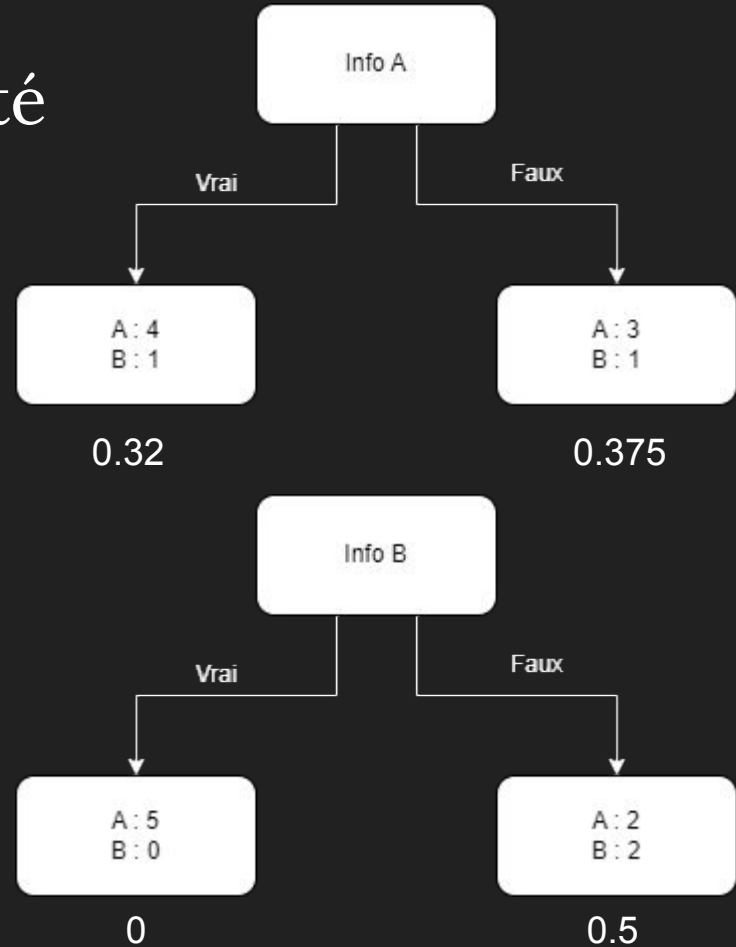
### III - Construction - Impureté

$$Gini(Leaf) = 1 - A^2 - B^2$$

$$Gini(Tree) = \sum_l W(l) Gini(l)$$

Arbre 1 : impurity = 0.34

Arbre 2 : impurity = 0.22



Place à la pratique !