

# Bayseian classification

1) Aim: To implement and design bayseian classification algorithm using weka.

## Algorithm:

- Determine root node
- Calculate entropy for classes
- Calculate entropy after split for each attributes.
- Calculate information gain
- Perform split
- Perform further split
- Compute bayseian classification algorithm

## Output:

The screenshot displays the Weka Explorer application window. The 'Classify' tab is active, and the 'NaiveBayes' classifier is selected. The 'Test options' section shows 'Cross-validation' with 'Folds' set to 10. The 'Classifier output' section displays the following results:

Classifier output

	no	165.0	55.0
[total]	203.0		87.0

Time taken to build model: 0 seconds

=== Stratified cross-validation ===

=== Summary ===

	no	165.0	55.0
Correctly Classified Instances	205		71.6783 %
Incorrectly Classified Instances	81		28.3217 %
Kappa statistic	0.2857		
Mean absolute error	0.3272		
Root mean squared error	0.4534		
Relative absolute error	79.2086 %		
Root relative squared error	99.1972 %		
Total Number of Instances	286		

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
Weighted Avg.	0.836	0.565	0.778	0.836	0.806	0.288	0.701	0.837	no-recurrence-events
	0.435	0.164	0.529	0.435	0.477	0.288	0.701	0.514	recurrence-events

=== Confusion Matrix ===

a	b	classified as
168	33	a = no-recurrence-events
49	37	b = recurrence-events

The bottom of the window shows the status bar with 'OK' and 'Log' buttons, and a small weather widget indicating '26°C Partly cloudy'.