Experiment 2.2

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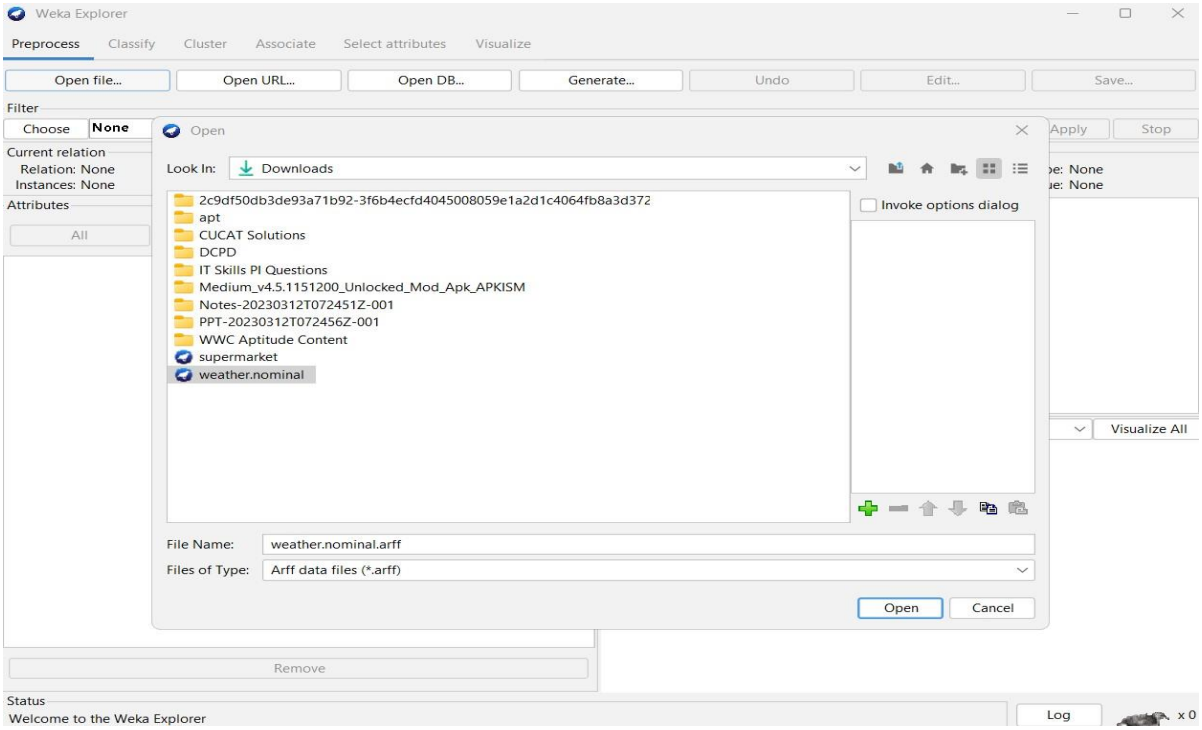
Subject Name: Data Mining Lab **Subject Code:** 20CSP-351

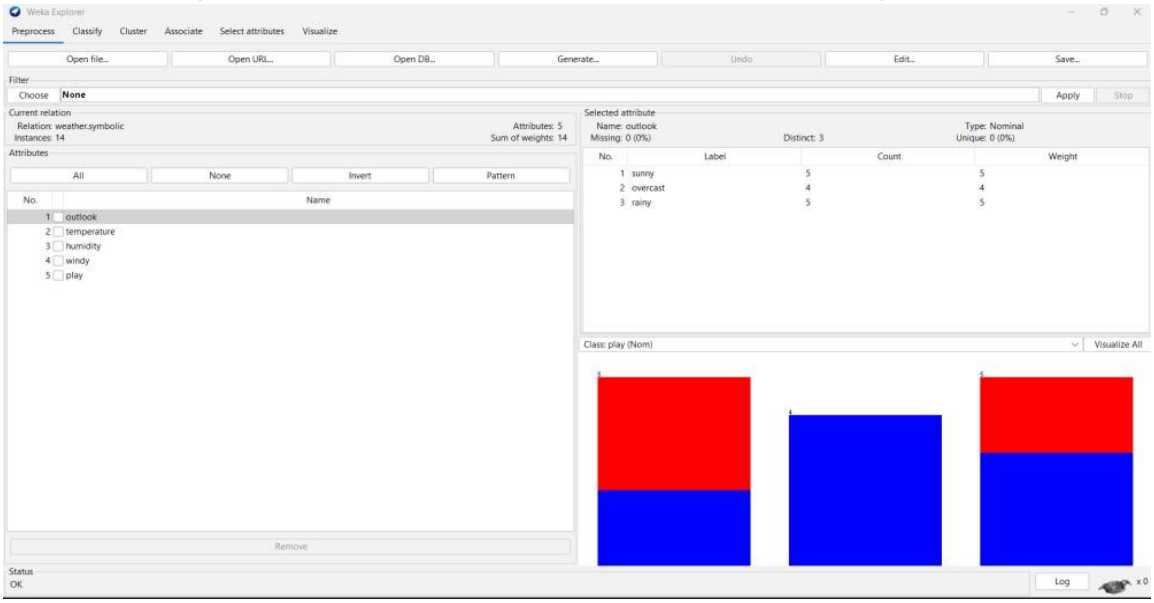
Aim: To perform classification using Bayesian classification algorithm using Rweka.

Procedure:

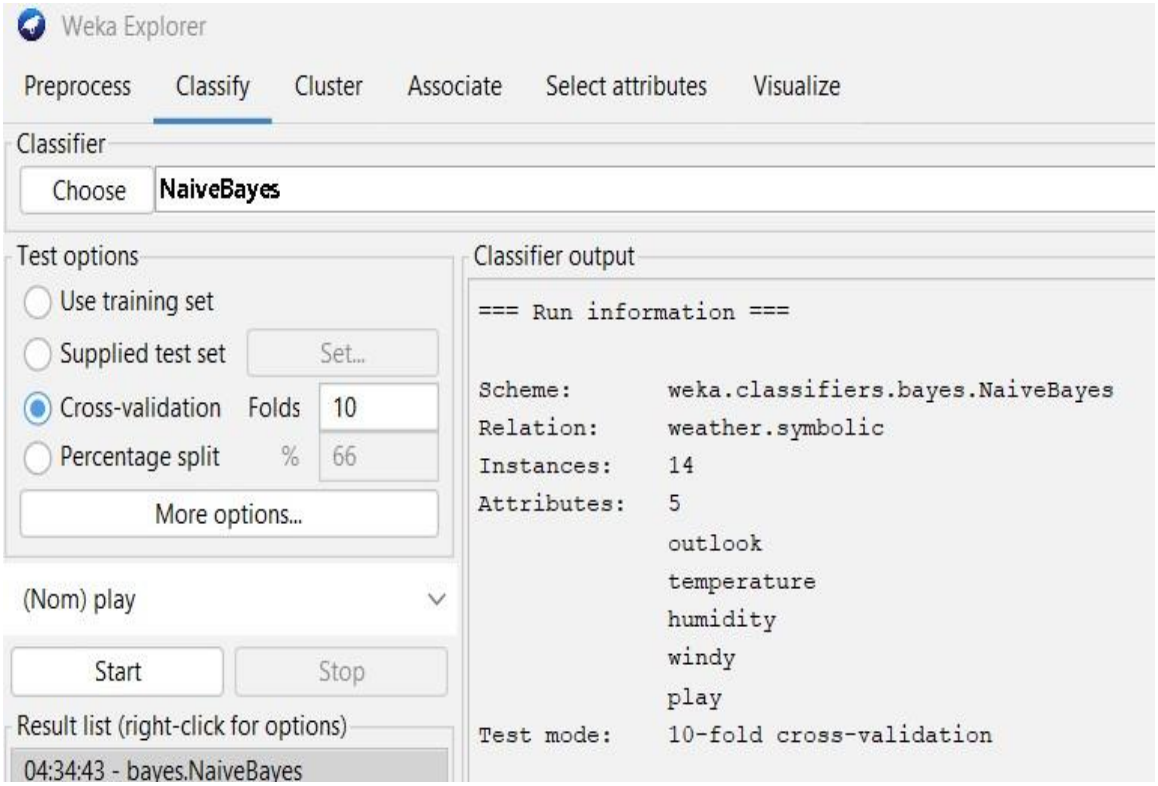
1. Load the weather Datatset.



2. Identify the attributes and decide a method to classify the dataset.



3. Go to the classify tab and choose “NaiveBayes Classifier”



4. Start the classification in order to display the results of the classification.

```
=== Classifier model (full training set) ===

Naive Bayes Classifier

                Class
Attribute         yes      no
                (0.63)  (0.38)
==============================
outlook
  sunny            3.0     4.0
  overcast         5.0     1.0
  rainy            4.0     3.0
  [total]         12.0     8.0

temperature
  hot              3.0     3.0
  mild             5.0     3.0
  cool             4.0     2.0
  [total]         12.0     8.0

humidity
  high             4.0     5.0
  normal           7.0     2.0
  [total]         11.0     7.0

windy
  TRUE             4.0     4.0
  FALSE            7.0     3.0
  [total]         11.0     7.0
```

5. The confusion matrix and statistics are evaluated as follows.

```
Time taken to build model: 0 seconds

=== Stratified cross-validation ===
=== Summary ===

Correctly Classified Instances           8               57.1429 %
Incorrectly Classified Instances         6               42.8571 %
Kappa statistic                         -0.0244
Mean absolute error                      0.4374
Root mean squared error                  0.4916
Relative absolute error                 91.8631 %
Root relative squared error             99.6492 %
Total Number of Instances               14

=== Detailed Accuracy By Class ===

                 TP Rate  FP Rate  Precision  Recall   F-Measure  MCC      ROC Area  PRC Area  Class
                 0.778    0.800    0.636      0.778    0.700      -0.026   0.578     0.697     yes
                 0.200    0.222    0.333      0.200    0.250      -0.026   0.578     0.557     no
Weighted Avg.    0.571    0.594    0.528      0.571    0.539      -0.026   0.578     0.647

=== Confusion Matrix ===

 a b   <-- classified as
 7 2 | a = yes
 4 1 | b = no
```