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Class: TY-3 Batch: B
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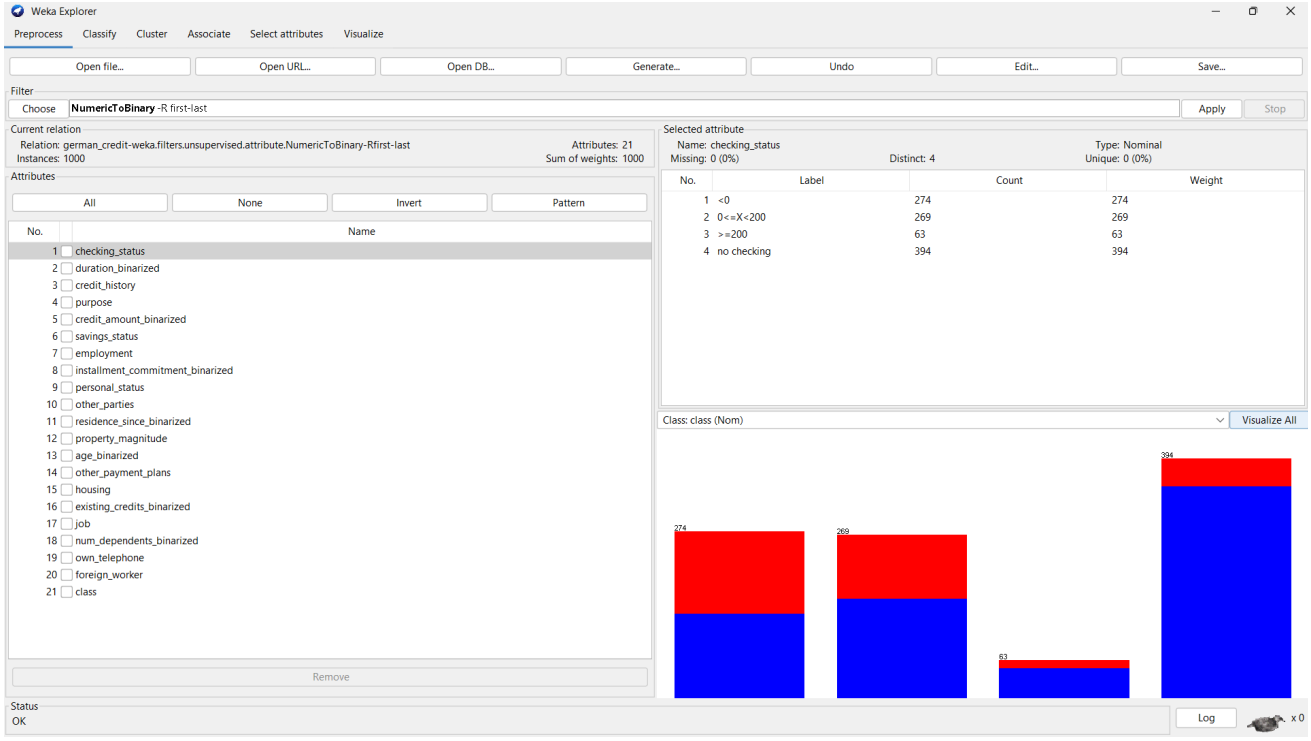
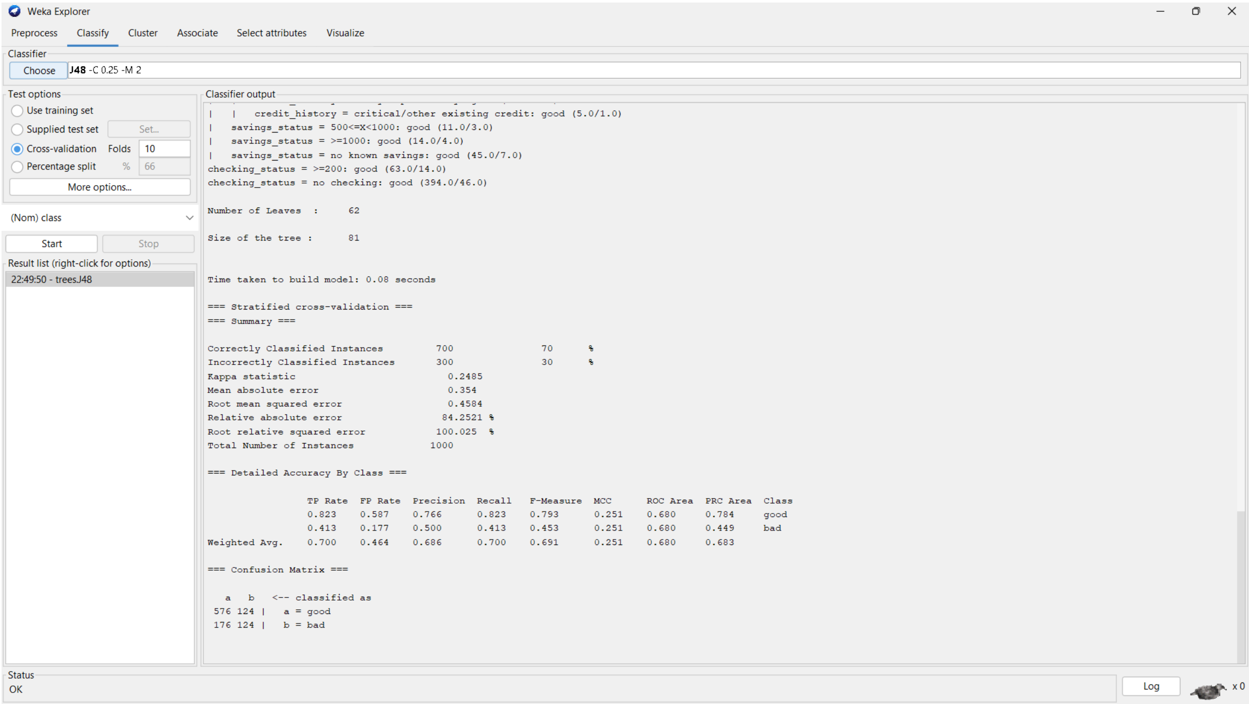
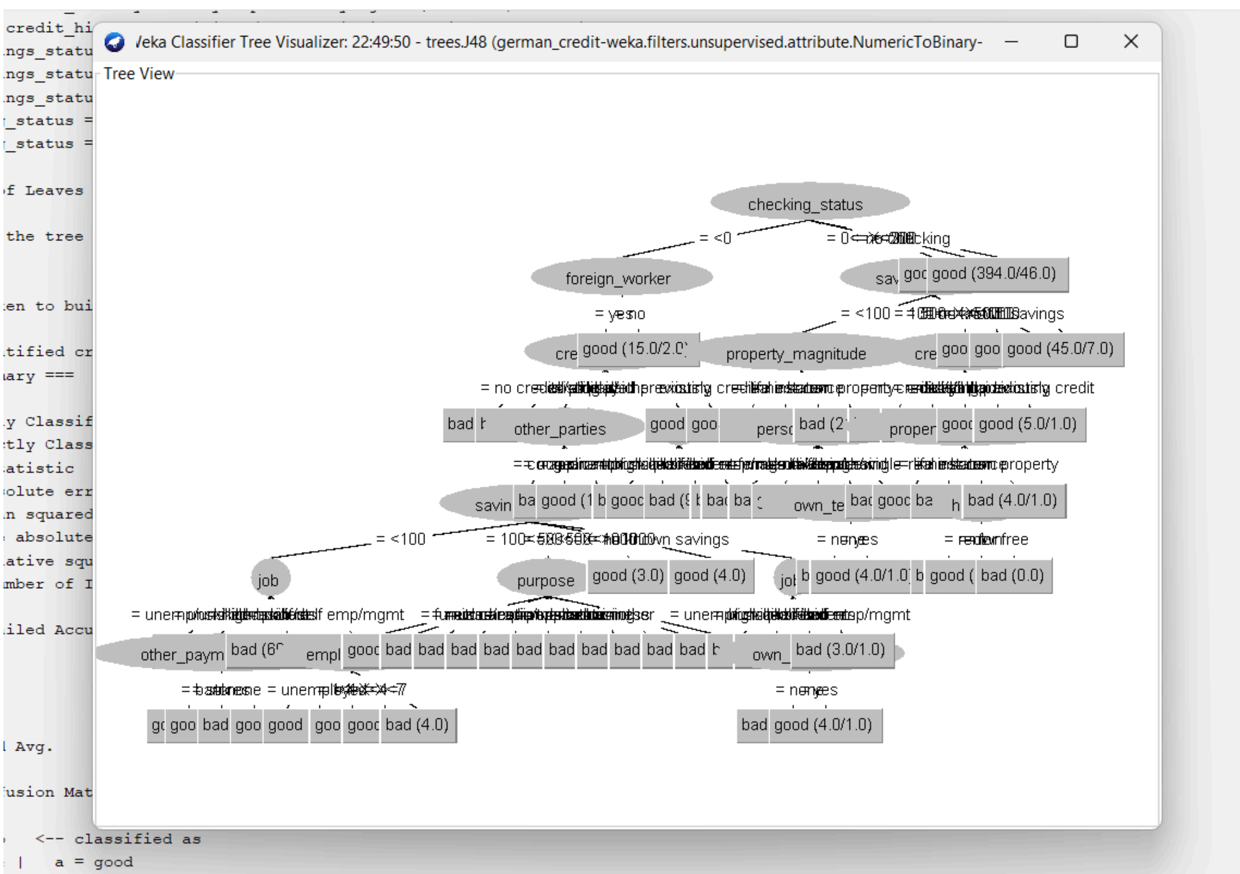
DWM Expt 8

Demonstrate Classification, Clustering, Association using weka

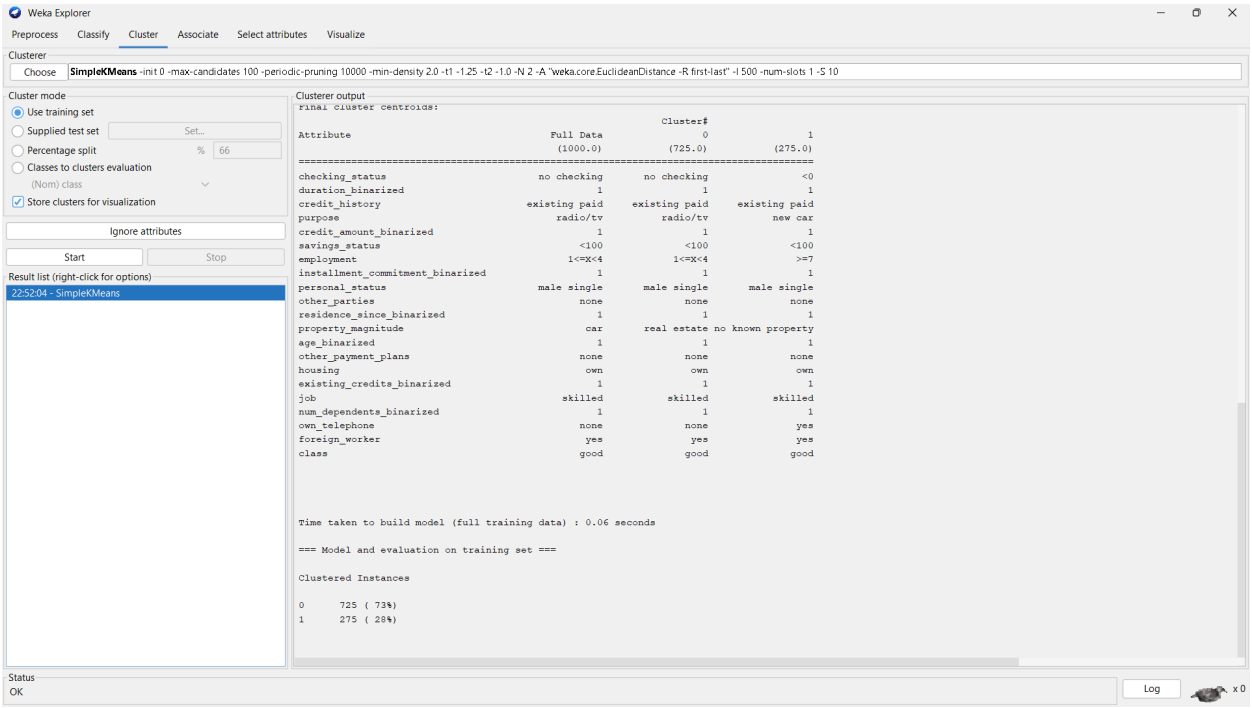
Data Pre-processing and Classification:




Weka Explorer
Preprocess
Classify
Cluster
Associate
Select attributes
Visualize
Classifier
Choose
J48 -C 0.25 -M 2
Test options
Use training set
Supplied test set
Set...
Cross-validation
Folds
10
Percentage split
%
66
More options...
(Nom) class
Start
Stop
Result list (right-click for options)
22:49:50 - trees.J48
Classifier output
| | credit_history = critical/other existing credit: good (5.0/1.0)
| savings_status = 500<=X<1000: good (11.0/3.0)
| savings_status = >=1000: good (14.0/4.0)
| savings_status = no known savings: good (45.0/7.0)
checking_status = >=200: good (63.0/14.0)
checking_status = no checking: good (394.0/46.0)
Number of Leaves : 62
Size of the tree : 81
Time taken to build model: 0.08 seconds
=== Stratified cross-validation ===
=== Summary ===
Correctly Classified Instances 700 70 %
Incorrectly Classified Instances 300 30 %
Kappa statistic 0.2485
Mean absolute error 0.354
Root mean squared error 0.4584
Relative absolute error 84.2521 %
Root relative squared error 100.025 %
Total Number of Instances 1000
=== Detailed Accuracy By Class ===
TP Rate FP Rate Precision Recall F-Measure MCC ROC Area PRC Area Class
0.823 0.587 0.766 0.823 0.793 0.251 0.680 0.784 good
0.413 0.177 0.500 0.413 0.453 0.251 0.680 0.449 bad
Weighted Avg. 0.700 0.464 0.686 0.700 0.691 0.251 0.680 0.683
=== Confusion Matrix ===
a b <-- classified as
576 124 | a = good
176 124 | b = bad
Status
OK
Log
x 0


Weka Classifier Tree Visualizer: 22:49:50 - trees.J48 (german_credit-weka.filters.unsupervised.attribute.NumericToBinary-
Tree View
checking_status
= <0
foreign_worker
good (394.0/46.0)
good (15.0/2.0)
property_magnitude
good (45.0/7.0)
other_parties
good (5.0/1.0)
bad (4.0/1.0)
= <100
job
purpose
good (3.0)
good (4.0)
good (4.0/1.0)
bad (0.0)
other_paym
bad (3.0/1.0)
bad (4.0)
good (4.0/1.0)
credit_hi
Leaves
the tree
<-- classified as
a = good

Clustering:



Association Algorithm (Apriori):