

## Data-Set

Weka Explorer

Preprocess Classify Cluster Associate Select attributes Visualize

Open file... Open URL... Open DB... Generate... Undo Edit... Save...

Filter: Choose None

Current relation: Relation: german\_credit  
Instances: 1000

Attributes: All

No.	Name	Type	Value
1	checking_status	Nominal	0
2	duration	Numeric	6.0
3	credit_history	Nominal	critical/other...
4	purpose	Nominal	radio/tv
5	credit_amount	Numeric	1169.0
6	savings_status	Nominal	no known savi...
7	employment	Nominal	=7
8	installment_commitment	Nominal	1=X(4)
9	personal_status	Nominal	4.0 male single
10	other_parties	Nominal	none
11	residence_since	Nominal	none
12	property_magnitude	Nominal	none

Status: OK

Log x 0

## With Outliers

Weka Explorer

Preprocess Classify Cluster Associate Select attributes Visualize

Open file... Open URL... Open DB... Generate... Undo Edit... Save...

Filter: Choose InterquartileRange -R 5 -O 3.0 -E 6.0

Current relation: Relation: german\_credit-weka.filters.unsupervised.attribute.InterquartileRange-R...  
Instances: 1000  
Attributes: 23  
Sum of weights: 1000

Attributes: All None Invert Pattern

No.	Name
1	checking_status
2	duration
3	credit_history
4	purpose
5	credit_amount
6	savings_status
7	employment
8	installment_commitment
9	personal_status
10	other_parties
11	residence_since
12	property_magnitude

Remove

Selected attribute: Name: checking\_status  
Missing: 0 (0%)  
Distinct: 4  
Type: Nominal  
Unique: 0 (0%)

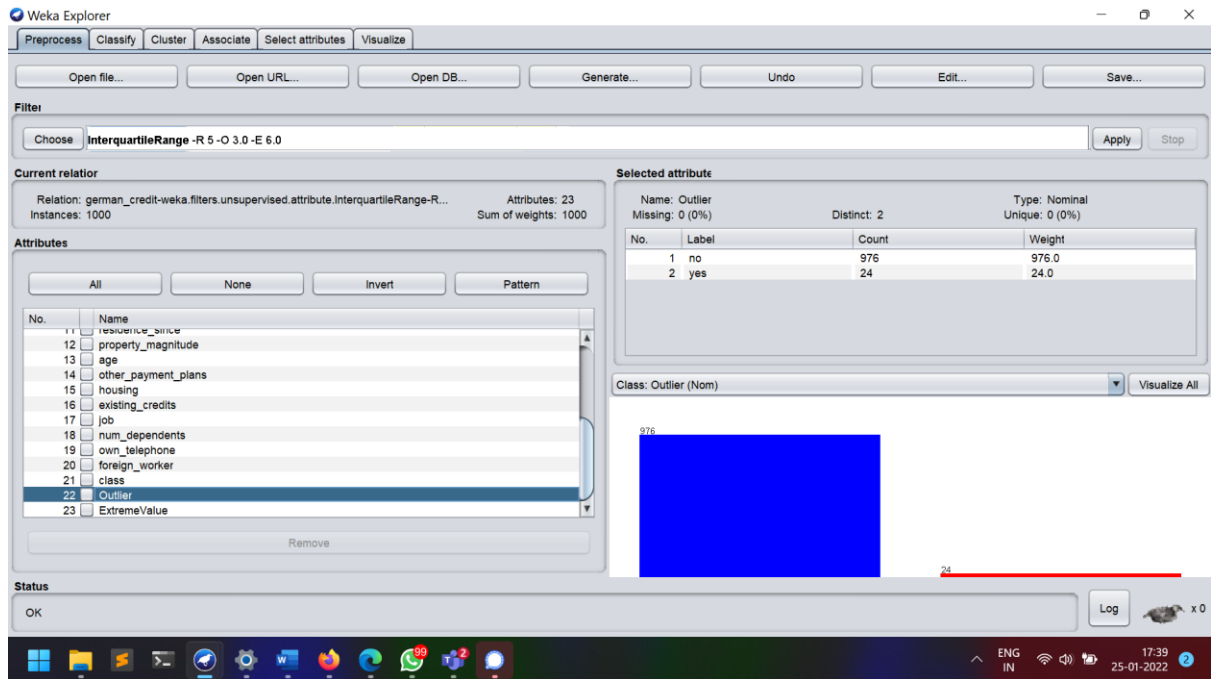
No.	Label	Count	Weight
1	<0	274	274.0
2	0<=X<200	269	269.0
3	>=200	63	63.0
4	no checking	394	394.0

Class: Outlier (Nom)

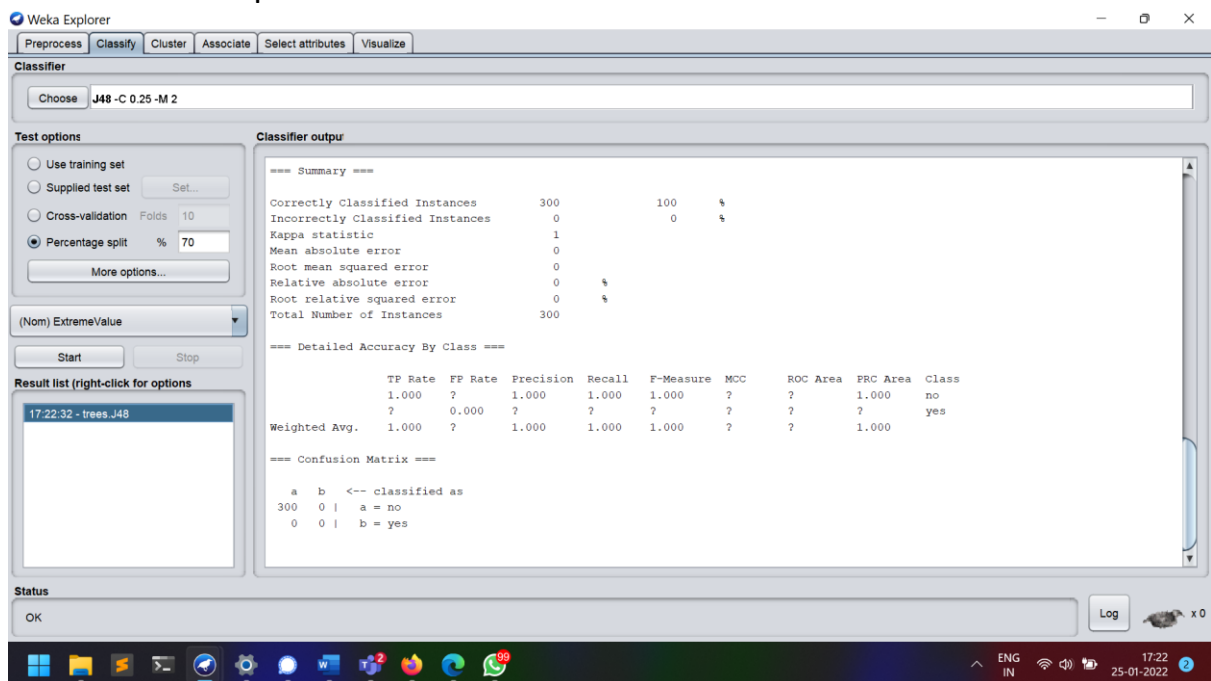
Visualize All

Status: OK

Log x 0



## Classification Report



## Removing the Outliers

The screenshot shows the Weka Explorer interface with the 'Preprocess' tab selected. A dialog box titled 'weka.gui.GenericObjectEditor' is open, showing the configuration for the 'RemoveWithValues' filter. The filter is set to remove instances based on the value of attribute 22 (Outlier). The 'nominalIndices' field is set to 'last', and the 'splitPoint' is 0.0. The background shows the 'Attributes' list with 'Outlier' and 'ExtremeValue' attributes. The 'Status' bar indicates 'OK'.

Weka Explorer

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

Open file... | Open URL... | Edit... | Save...

Filter: Choose RemoveWithValues -S 0.0 -C 22 -L last

Current relation: Relation: german\_credit-weka.filters.unsupervised.attribute.Interquartile... Instances: 1000

Attributes: All | None | Invert

No.	Name
11	residence_size
12	property_magnitude
13	age
14	other_payment_plans
15	housing
16	existing_credits
17	job
18	num_dependents
19	own_telephone
20	foreign_worker
21	class
22	Outlier
23	ExtremeValue

Remove

Status: OK

Log x 0

## Outliers are removed

The screenshot shows the Weka Explorer interface after the outliers have been removed. The 'RemoveWithValues' filter is still applied. The 'Current relation' now shows 976 instances. The 'Attributes' list is the same. The 'Status' bar indicates 'OK'.

Weka Explorer

Preprocess | Classify | Cluster | Associate | Select attributes | Visualize

Open file... | Open URL... | Open DB... | Generate... | Undo | Edit... | Save...

Filter: Choose RemoveWithValues -S 0.0 -C 22 -L last

Current relation: Relation: german\_credit-weka.filters.unsupervised.attribute.InterquartileRange-R5... Attributes: 23 Instances: 976 Sum of weights: 976

Attributes: All | None | Invert | Pattern

No.	Name
11	residence_size
12	property_magnitude
13	age
14	other_payment_plans
15	housing
16	existing_credits
17	job
18	num_dependents
19	own_telephone
20	foreign_worker
21	class
22	Outlier
23	ExtremeValue

Remove

Status: OK

Log x 0

# Classification Report

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 % 70  
More options...

(Nom) ExtremeValue

Start Stop

Result list (right-click for options)

17:36:14 - trees.J48  
17:42:48 - trees.J48

Classifier output

```
Correctly Classified Instances      293      100 %  
Incorrectly Classified Instances      0      0 %  
Kappa statistic      1  
Mean absolute error      0  
Root mean squared error      0  
Relative absolute error      0 %  
Root relative squared error      0 %  
Total Number of Instances      293  
  
=== Detailed Accuracy By Class ===  
  
      TP Rate  FP Rate  Precision  Recall  F-Measure  MCC      ROC Area  PRC Area  Class  
1.000      ?      1.000      1.000      1.000      ?      ?      1.000      no  
?      0.000      ?      ?      ?      ?      ?      ?      yes  
Weighted Avg.      1.000      ?      1.000      1.000      1.000      ?      ?      1.000  
  
=== Confusion Matrix ===  
  
      a      b  <-- classified as  
293      0 |  a = no  
0      0 |  b = yes
```

Status

OK Log x 0

ENG IN 17:42 25-01-2022