

Weka Explorer

Preprocess **Classify** Cluster Associate Select attributes Visualize

Classifier

Choose **SMO** -C 1.0 -L 0.001 -P 1.0E-12 -N 0 -V -1 -W 1 -K "weka.classifiers.functions.supportVector.PolyKernel -E 1.0 -C 250007" -calibrator "weka.classifiers.functions.Logistic -R 1.0E-12"

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)

11:15:35 - functions.SMO

Classifier output

```

=== Run information ===

Scheme:      weka.classifiers.functions.SMO -C 1.0 -L 0.001 -P 1.0E-12 -N 0 -V -1 -W 1 -K "weka.classifiers.functions.supportVector.PolyKernel -E 1.0 -C 250007" -calibrator "weka.classifiers.functions.Logistic -R 1.0E-12"
Relation:    german_credit
Instances:   1000
Attributes:  21
              checking_status
              duration
              credit_history
              purpose
              credit_amount
              savings_status
              employment
              installment_commitment
              personal_status
              other_parties
              residence_since
              property_magnitude
              age
              other_payment_plans
              housing
              existing_credits
              job
              num_dependents
              own_telephone
              foreign_worker
              class
Test mode:   10-fold cross-validation

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

SMO

```

Status OK Log x 0

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

SMO

Kernel used:
  Linear Kernel: K(x,y) = <x,y>

Classifier for classes: good, bad

BinarySMO

Machine linear: showing attribute weights, not support vectors.

0.6805 * (normalized) checking_status=<0
+ 0.3347 * (normalized) checking_status=0<=X<200
+ -0.4616 * (normalized) checking_status=>=200
+ -0.5537 * (normalized) checking_status=no checking
+ 1.6987 * (normalized) duration
+ 0.5398 * (normalized) credit_history=no credits/all paid
+ 0.6015 * (normalized) credit_history=all paid
+ -0.109 * (normalized) credit_history=existing paid
+ -0.3182 * (normalized) credit_history=delayed previously
+ -0.7141 * (normalized) credit_history=critical/other existing credit
+ 0.5673 * (normalized) purpose=new car
+ -0.5615 * (normalized) purpose=used car
+ -0.1464 * (normalized) purpose=furniture/equipment
+ -0.0798 * (normalized) purpose=radio/tv
+ 0.5456 * (normalized) purpose=domestic appliance
+ -0 * (normalized) purpose=repairs
+ 0.4441 * (normalized) purpose=education
+ -0.3951 * (normalized) purpose=retraining
+ -0.0823 * (normalized) purpose=business

```

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```
+ -0.0823 * (normalized) purpose=business
+ -0.2919 * (normalized) purpose=other
+ 1.1473 * (normalized) credit_amount
+ 0.4056 * (normalized) savings_status<=100
+ 0.115 * (normalized) savings_status=100<=X<500
+ 0.1378 * (normalized) savings_status=500<=X<1000
+ -0.3775 * (normalized) savings_status>=1000
+ -0.2809 * (normalized) savings_status=no known savings
+ 0.2887 * (normalized) employment=unemployed
+ 0.1663 * (normalized) employment=<1
+ 0.0021 * (normalized) employment=1<=X<4
+ -0.3348 * (normalized) employment=4<=X<7
+ -0.1222 * (normalized) employment>=7
+ 0.6503 * (normalized) installment_commitment
+ 0.3335 * (normalized) personal_status=male div/sep
+ 0.1177 * (normalized) personal_status=female div/dep/mar
+ -0.3697 * (normalized) personal_status=male single
+ -0.0815 * (normalized) personal_status=male mar/wid
+ 0.0514 * (normalized) other_parties=none
+ 0.5697 * (normalized) other_parties=co applicant
+ -0.6211 * (normalized) other_parties=guarantor
+ -0.0001 * (normalized) residence_since
+ -0.2247 * (normalized) property_magnitude=real estate
+ -0.0544 * (normalized) property_magnitude=life insurance
+ -0.0795 * (normalized) property_magnitude=car
+ 0.3586 * (normalized) property_magnitude=no known property
+ -0.4191 * (normalized) age
+ 0.0697 * (normalized) other_payment_plans=bank
+ 0.159 * (normalized) other_payment_plans=stores
+ -0.2287 * (normalized) other_payment_plans=none
+ 0.3271 * (normalized) housing=rent
+ -0.0702 * (normalized) housing=own
```

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Classifier output

```
+ 0.3271 * (normalized) housing=rent
+ -0.0702 * (normalized) housing=own
+ -0.257 * (normalized) housing=for free
+ 0.4503 * (normalized) existing_credits
+ -0.2026 * (normalized) job=unemp/unskilled non res
+ 0.1501 * (normalized) job=unskilled resident
+ 0.1027 * (normalized) job=skilled
+ -0.0502 * (normalized) job=high qualif/self emp/mgmt
+ 0.0198 * (normalized) num_dependents
+ -0.1394 * (normalized) own_telephone=yes
+ -0.9888 * (normalized) foreign_worker=no
- 1.5398
```

Number of kernel evaluations: 436644 (90.558% cached)

Time taken to build model: 0.28 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances	751	75.1	%
Incorrectly Classified Instances	249	24.9	%
Kappa statistic	0.3654		
Mean absolute error	0.249		
Root mean squared error	0.499		
Relative absolute error	59.2607	%	
Root relative squared error	108.8905	%	
Total Number of Instances	1000		

=== Detailed Accuracy By Class ===

Status OK Log x 0