

Preprocess

Classify

Cluster

Associate

Select attributes

Visualize

Open file...

Open URL...

Open DB...

Generate...

Undo

Edit...

Save...

Filter

Choose

None

Apply

Stop

Current relation

Relation: semeion-weka.filters.unsupervised.attribute....

Instances: 1593

Attributes: 257

Sum of weights: 1593

Attributes

All

None

Invert

Pattern

No.		Name
240	<input checked="" type="checkbox"/>	239
241	<input checked="" type="checkbox"/>	240
242	<input checked="" type="checkbox"/>	241
243	<input checked="" type="checkbox"/>	242
244	<input checked="" type="checkbox"/>	243
245	<input checked="" type="checkbox"/>	244
246	<input checked="" type="checkbox"/>	245
247	<input checked="" type="checkbox"/>	246
248	<input checked="" type="checkbox"/>	247
249	<input checked="" type="checkbox"/>	248
250	<input checked="" type="checkbox"/>	249
251	<input checked="" type="checkbox"/>	250
252	<input checked="" type="checkbox"/>	251
253	<input checked="" type="checkbox"/>	252
254	<input checked="" type="checkbox"/>	253
255	<input checked="" type="checkbox"/>	254
256	<input checked="" type="checkbox"/>	255
257	<input type="checkbox"/>	class

Remove

Selected attribute

Name: class

Missing: 0 (0%)

Distinct: 10

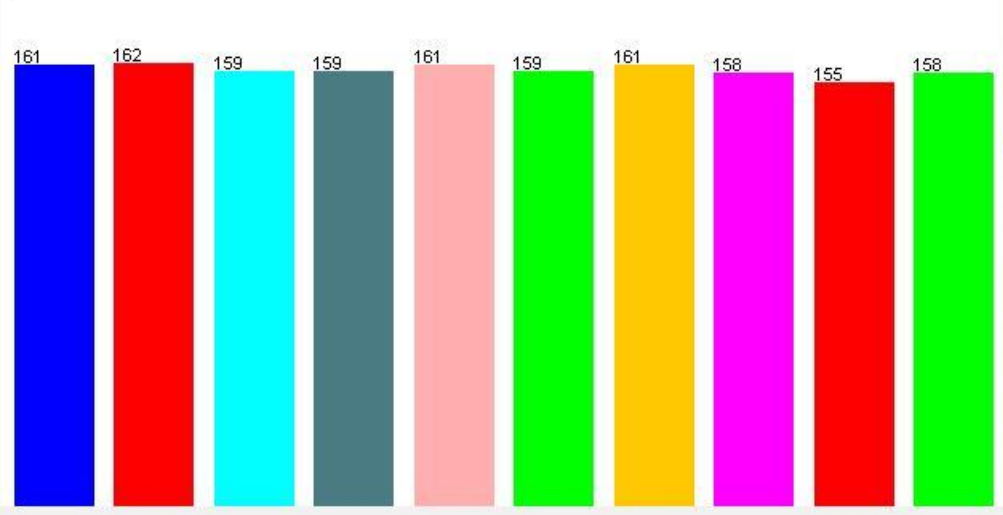
Type: Nominal

Unique: 0 (0%)

No.	Label	Count	Weight
1	0	161	161
2	1	162	162
3	2	159	159
4	3	159	159
5	4	161	161
6	5	159	159
7	6	161	161
8	7	158	158
9	8	155	155
10	9	158	158

Class: class (Nom)

Visualize All



Classifier

Choose IBk -K 1 -W 0 -X -A "weka.core.neighboursearch.LinearNNSearch -A \"weka.core.ManhattanDistance -R first-last\""

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)

- 23:11:38 - rules.ZeroR
- 23:11:48 - lazy.IBk
- 23:12:26 - lazy.IBk
- 23:12:55 - lazy.IBk
- 23:14:03 - lazy.IBk
- 23:15:14 - lazy.IBk
- 23:16:40 - lazy.IBk
- 23:19:31 - lazy.IBk

weka.gui.GenericObjectEditor

weka.classifiers.lazy.IBk

About

K-nearest neighbours classifier.

More

Capabilities

KNN 1

batchSize 100

crossValidate True

debug False

distanceWeighting No distance weighting

doNotCheckCapabilities False

meanSquared False

nearestNeighbourSearchAlgorithm Choose LinearNNSearch -A "wek

numDecimalPlaces 2

windowSize 0

Open... Save... OK Cancel

MCC	ROC Area	PRC Area	Class
0.972	0.986	0.952	0
0.874	0.975	0.830	1
0.902	0.976	0.896	2
0.886	0.970	0.822	3
0.930	0.962	0.902	4
0.893	0.958	0.846	5
0.932	0.969	0.877	6
0.928	0.967	0.915	7
0.857	0.918	0.816	8
0.830	0.901	0.782	9
0.901	0.958	0.864	

1 3 15 5 0 1 3 0 122 5 | i = 8

1 5 0 14 1 9 1 1 3 123 | j = 9



Classifier

Choose

IBk -K 1 -W 0 -X -A "weka.core.neighboursearch.LinearNNSearch -A \"weka.core.ManhattanDistance -R first-last\""

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)
- 23:11:38 - rules.ZeroR

23:11:48 - lazy.IBk

23:12:26 - lazy.IBk

23:12:55 - lazy.IBk

23:14:03 - lazy.IBk

23:15:14 - lazy.IBk

23:16:40 - lazy.IBk

23:19:31 - lazy.IBk

23:20:53 - lazy.IBk

Classifier output

Root relative squared error43.379 %

Total Number of Instances1593

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0.975	0.003	0.975	0.975	0.975	0.972	0.986	0.952	0
	0.969	0.025	0.813	0.969	0.885	0.874	0.975	0.830	1
	0.937	0.013	0.887	0.937	0.911	0.902	0.976	0.896	2
	0.950	0.019	0.848	0.950	0.896	0.886	0.970	0.822	3
	0.913	0.004	0.961	0.913	0.936	0.930	0.962	0.902	4
	0.918	0.013	0.890	0.918	0.904	0.893	0.958	0.846	5
	0.957	0.009	0.922	0.957	0.939	0.932	0.969	0.877	6
	0.905	0.003	0.966	0.905	0.935	0.928	0.967	0.915	7
	0.787	0.003	0.961	0.787	0.865	0.857	0.918	0.816	8
	0.778	0.008	0.918	0.778	0.842	0.830	0.901	0.782	9
Weighted Avg.	0.910	0.010	0.914	0.910	0.909	0.901	0.958	0.864	

=== Confusion Matrix ===

	a	b	c	d	e	f	g	h	i	j	<-- classified as
157	0	0	0	1	0	2	0	1	0	1	a = 0
0	157	1	2	0	1	0	0	0	1	1	b = 1
0	3	149	2	1	0	0	2	1	1	1	c = 2
0	1	1	151	0	4	0	1	0	1	1	d = 3
0	10	1	0	147	0	1	1	0	1	1	e = 4
0	1	0	4	1	146	6	0	0	1	1	f = 5
2	0	0	0	2	3	154	0	0	0	0	g = 6
0	13	1	0	0	0	0	143	0	1	1	h = 7
1	3	15	5	0	1	3	0	122	5	1	i = 8
1	5	0	14	1	9	1	1	3	123	1	j = 9

Classifier

Choose IBk -K 3 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A \"weka.core.ManhattanDistance -R first-last\""

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)
- 23:11:38 - rules.ZeroR

23:11:48 - lazy.IBk

23:12:26 - lazy.IBk

23:12:55 - lazy.IBk

23:14:03 - lazy.IBk

23:15:14 - lazy.IBk

23:16:40 - lazy.IBk

23:19:31 - lazy.IBk

23:20:53 - lazy.IBk

weka.gui.GenericObjectEditor

weka.classifiers.lazy.IBk

About

K-nearest neighbours classifier.

More

Capabilities

KNN 3

batchSize 100

crossValidate False

debug False

distanceWeighting No distance weighting

doNotCheckCapabilities False

meanSquared False

nearestNeighbourSearchAlgorithm Choose LinearNNSearch -A "weka.core.ManhattanDistance -R first-last"

numDecimalPlaces 2

windowSize 0

Open...

Save...

OK

Cancel

MCC	ROC Area	PRC Area	Class
0.972	0.986	0.952	0
0.874	0.975	0.830	1
0.902	0.976	0.896	2
0.886	0.970	0.822	3
0.930	0.962	0.902	4
0.893	0.958	0.846	5
0.932	0.969	0.877	6
0.928	0.967	0.915	7
0.857	0.918	0.816	8
0.830	0.901	0.782	9
0.901	0.958	0.864	

Classifier

Choose

IBk -K 3 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A \"weka.core.ManhattanDistance -R first-last\""

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)
- 23:11:38 - rules.ZeroR

23:11:48 - lazy.IBk

23:12:26 - lazy.IBk

23:12:55 - lazy.IBk

23:14:03 - lazy.IBk

23:15:14 - lazy.IBk

23:16:40 - lazy.IBk

23:19:31 - lazy.IBk

23:20:53 - lazy.IBk

23:27:21 - lazy.IBk

Classifier output

Root relative squared error39.332 %

Total Number of Instances1593

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0.981	0.006	0.952	0.981	0.966	0.963	0.998	0.984	0
	0.981	0.034	0.764	0.981	0.859	0.850	0.993	0.938	1
	0.943	0.015	0.877	0.943	0.909	0.899	0.995	0.966	2
	0.943	0.020	0.838	0.943	0.888	0.876	0.991	0.951	3
	0.907	0.004	0.961	0.907	0.933	0.926	0.978	0.949	4
	0.943	0.014	0.882	0.943	0.912	0.902	0.994	0.961	5
	0.957	0.006	0.951	0.957	0.954	0.948	0.986	0.963	6
	0.873	0.003	0.965	0.873	0.917	0.910	0.992	0.978	7
	0.742	0.006	0.935	0.742	0.827	0.818	0.934	0.877	8
	0.722	0.003	0.958	0.722	0.823	0.816	0.944	0.878	9
Weighted Avg.	0.900	0.011	0.908	0.900	0.899	0.891	0.981	0.945	

=== Confusion Matrix ===

	a	b	c	d	e	f	g	h	i	j	<-- classified as
158	0	0	0	1	0	0	0	0	2	0	a = 0
0	159	0	2	0	0	0	0	1	0	0	b = 1
0	6	150	1	1	0	0	0	0	1	0	c = 2
0	3	1	150	0	3	0	1	0	1	1	d = 3
0	10	2	0	146	0	0	1	0	2	2	e = 4
1	1	0	4	0	150	3	0	0	0	0	f = 5
3	0	0	0	2	2	154	0	0	0	0	g = 6
0	17	1	0	1	0	1	138	0	0	0	h = 7
1	4	16	8	0	5	3	1	115	2	1	i = 8
3	8	1	14	1	10	1	1	5	114	1	j = 9

Classifier

Choose IBk -K 5 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A \"weka.core.ManhattanDistance -R first-last\""

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)
- 23:11:38 - rules.ZeroR

23:11:48 - lazy.IBk

23:12:26 - lazy.IBk

23:12:55 - lazy.IBk

23:14:03 - lazy.IBk

23:15:14 - lazy.IBk

23:16:40 - lazy.IBk

23:19:31 - lazy.IBk

23:20:53 - lazy.IBk

23:27:21 - lazy.IBk

23:28:11 - lazy.IBk

Classifier output

Root relative squared error39.3459 %

Total Number of Instances1593

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0.981	0.006	0.946	0.981	0.963	0.959	0.999	0.989	0
	0.969	0.031	0.777	0.969	0.863	0.852	0.993	0.958	1
	0.943	0.010	0.909	0.943	0.926	0.918	0.993	0.975	2
	0.956	0.020	0.840	0.956	0.894	0.884	0.996	0.952	3
	0.925	0.005	0.955	0.925	0.940	0.934	0.988	0.967	4
	0.937	0.015	0.876	0.937	0.906	0.896	0.998	0.980	5
	0.957	0.007	0.939	0.957	0.948	0.942	0.990	0.979	6
	0.886	0.002	0.979	0.886	0.930	0.924	0.998	0.986	7
	0.755	0.005	0.944	0.755	0.839	0.830	0.971	0.916	8
	0.722	0.005	0.942	0.722	0.817	0.809	0.962	0.893	9
Weighted Avg.	0.904	0.011	0.910	0.904	0.903	0.895	0.989	0.960	

=== Confusion Matrix ===

	a	b	c	d	e	f	g	h	i	j	<-- classified as
158	0	0	0	1	0	1	0	1	0	0	a = 0
0	157	1	2	1	0	0	1	0	0	0	b = 1
0	5	150	1	1	0	0	0	0	2	0	c = 2
0	3	0	152	0	3	0	0	0	1	1	d = 3
0	9	1	0	149	0	0	1	0	1	1	e = 4
2	0	0	1	0	149	5	0	0	2	1	f = 5
3	0	0	0	2	2	154	0	0	0	0	g = 6
0	16	0	0	1	0	1	140	0	0	0	h = 7
1	4	13	10	0	5	2	0	117	3	1	i = 8
3	8	0	15	1	11	1	1	4	114	1	j = 9

Classifier

Choose

IBk -K 12 -W 0 -A "weka.core.neighboursearch.LinearNNSearch -A \"weka.core.ManhattanDistance -R first-last\""

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)
- 23:11:38 - rules.ZeroR

23:11:48 - lazy.IBk

23:12:26 - lazy.IBk

23:12:55 - lazy.IBk

23:14:03 - lazy.IBk

23:15:14 - lazy.IBk

23:16:40 - lazy.IBk

23:19:31 - lazy.IBk

23:20:53 - lazy.IBk

23:27:21 - lazy.IBk

23:28:11 - lazy.IBk

23:28:46 - lazy.IBk

23:29:08 - lazy.IBk

23:29:27 - lazy.IBk

Classifier output

IB1 instance-based classifier
using 12 nearest neighbour(s) for classification

Time taken to build model: 0 seconds

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

Correctly Classified Instances	1430	89.7677 %
Incorrectly Classified Instances	163	10.2323 %
Kappa statistic	0.8863	
Mean absolute error	0.0419	
Root mean squared error	0.129	
Relative absolute error	23.2584 %	
Root relative squared error	43.0121 %	
Total Number of Instances	1593	

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0.981	0.010	0.919	0.981	0.949	0.944	1.000	0.997	0
	0.963	0.035	0.757	0.963	0.848	0.836	0.996	0.968	1
	0.943	0.009	0.920	0.943	0.932	0.924	0.997	0.980	2
	0.950	0.021	0.834	0.950	0.888	0.877	0.996	0.967	3
	0.894	0.006	0.947	0.894	0.920	0.912	0.989	0.973	4
	0.931	0.015	0.876	0.931	0.902	0.892	0.998	0.982	5
	0.944	0.007	0.938	0.944	0.941	0.935	0.999	0.990	6
	0.880	0.004	0.959	0.880	0.917	0.910	0.997	0.975	7
	0.774	0.005	0.945	0.774	0.851	0.842	0.984	0.940	8
	0.709	0.003	0.966	0.709	0.818	0.812	0.982	0.914	9
Weighted Avg.	0.898	0.011	0.906	0.898	0.897	0.889	0.994	0.969	