



Version 2.9.1

(Build January 15, 2014)

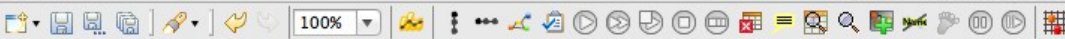
Installed Extensions:



Loading Workbench



Copyright, 2003 - 2013, KNIME GmbH, Germany, <http://www.knime.org/>, contact@knime.org



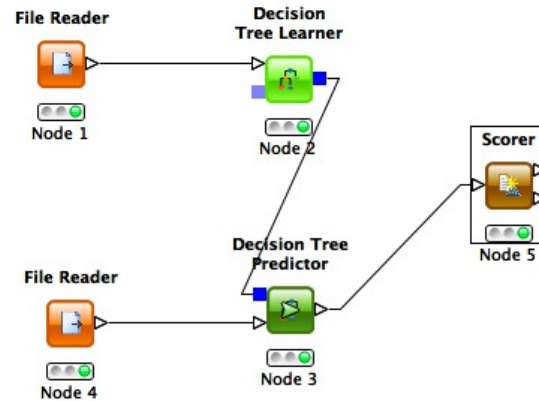
KNIME Explorer Workflow Proj...

- AEsposito_KNIME_project
- CristianoCaturano
- FINGERPRINT_ADAM 1
- IA-Workflow-Cirillo
- IA_contest_M63000268
- KNIME_DEMO
- KNIME_project
- KNIME_project2
- KNIME_project3
- PC-04-MLPClassification

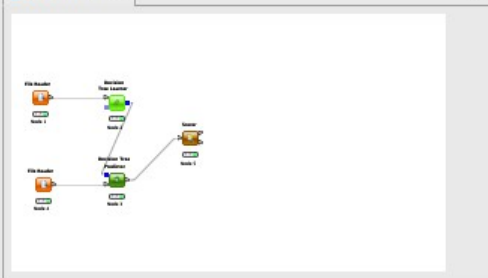
Node Repository

- Database
- Data Manipulation
- Data Views
- Statistics
- Mining
 - Bayes
 - Clustering
 - Rule Induction
 - Neural Network
 - Decision Tree
 - Decision Tree Learner
 - Decision Tree Predictor
 - Decision Tree To Image
- Misc Classifiers
- Ensemble Learning
- Item Sets / Association Rules
- MDS
- PCA
- SVM
- Scoring
 - Enrichment Plotter
 - Entropy Scorer
 - Numeric Scorer
 - ROC Curve
 - Scorer
 - C Cost
- Meta
- Chemistry

*2: KNIME_DEMO



Outline



Console

```

*** Copyright ***
Log file is located at:
WARN ARFF File
WARN File
WARN Decis
WARN File
WARN Score
ERROR Score
  
```

Node Description

Confusion Matrix - 2:5 - Scorer

File	Hilite		
class \ Pre...	Iris-setosa	Iris-versic...	Iris-virginica
Iris-setosa	25	0	0
Iris-versic...	0	23	2
Iris-virginica	0	2	23

Correct classified: 71

Wrong classified: 4

Accuracy: 94,667 %

Error: 5,333 %

Cohen's kappa (κ) 0,92

Decision Tree View - 2:2 - Decision Tree Learner

File Hilite Tree

Iris-setosa (25/75)

Table:

Category	%	n
Iris-setosa	33,3	25
Iris-versicolor	33,3	25
Iris-virginica	33,3	25
Total	100,0	75

petal width

<= 0,75

> 0,75

Iris-setosa (25/25)

Table:

Category	%	n
Iris-setosa	100,0	25
Iris-versicolor	0,0	0
Iris-virginica	0,0	0
Total	33,3	25

Iris-versicolor (25/50)

Table:

Category	%	n
Iris-setosa	0,0	0
Iris-versicolor	50,0	25
Iris-virginica	50,0	25
Total	66,7	50

Zoom:

100.0%

and column by
columns. The
the confusion
er of matches
y, the second
number of
ch as True-
tives, Recall,
Specificity, F-
s the overall
kappa.

S

g. Please wait

KNIME Explorer

Workflow Proj...

Node Repository

Scatter Plot

Spark Line Appender

Radar Plot Appender

Statistics

Hypothesis Testing

Regression

Linear Correlation

Correlation Filter

Statistics

Crosstab

Value Counter

Mining

Bayes

Clustering

Rule Induction

Neural Network

MLP

MultiLayerPerceptron Predictor

RProp MLP Learner

PNN

Decision Tree

Decision Tree Learner

Decision Tree Predictor

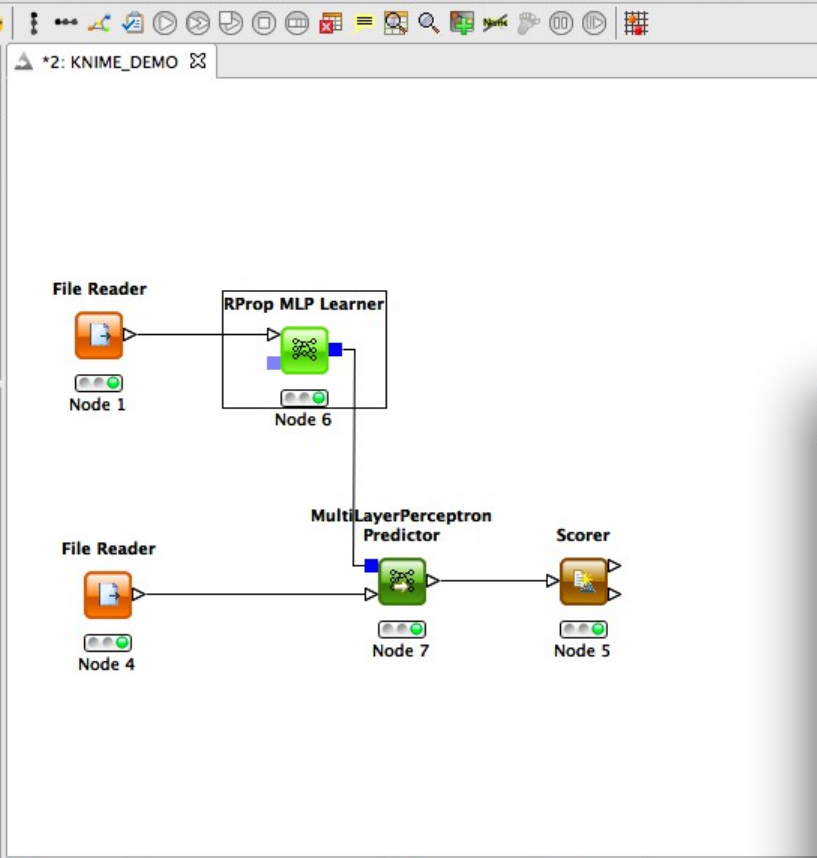
Decision Tree To Image

Misc Classifiers

Ensemble Learning

Item Sets / Association Rules

MDS



Outline

Console

Progress

KNIME Console

WARN RProp MLP Learner

WARN RProp MLP Learner

WARN RProp MLP Learner

WARN RProp MLP Learner

WARN RProp MLP Learner

WARN RProp MLP Learner

WARN RProp MLP Learner

WARN RProp MLP Learner

WARN RProp MLP Learner

WARN RProp MLP Learner

File	Hilite			
class \ Pre...	Iris-setosa	Iris-versic...	Iris-virginica	
Iris-setosa	25	0	0	
Iris-versic...	0	24	1	
Iris-virginica	0	4	21	

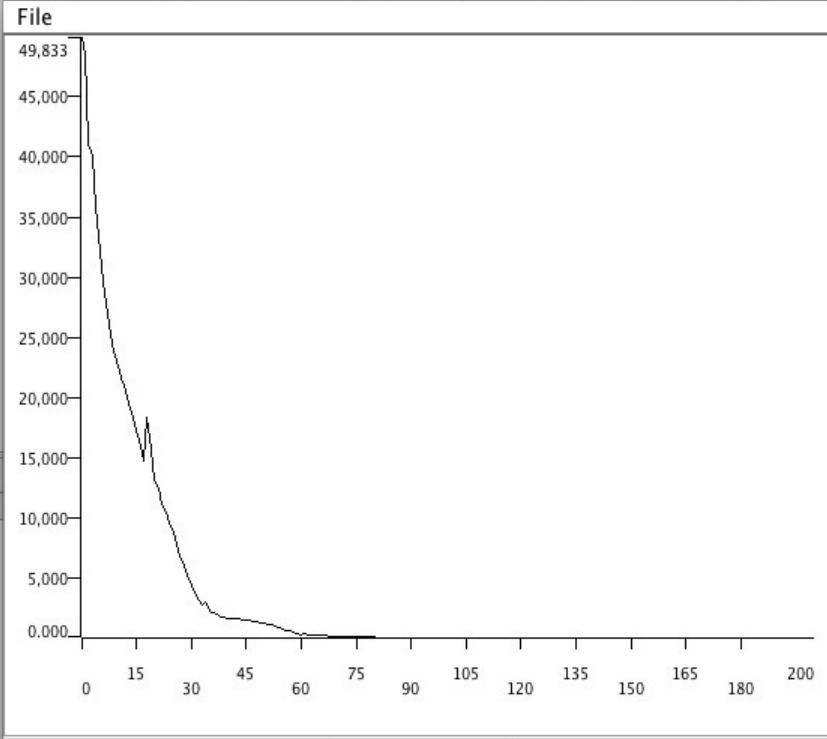
Correct classified: 70

Wrong classified: 5

Accuracy: 93,333 %

Error: 6,667 %

Cohen's kappa (κ) 0,9



KNIME - /Applications/knime/workspace

100%

KNIME E... Workflow... *2: KNIME_DEMO

Node Repository

- Hypothesis Testing
- Regression
- Linear Correlation
- Correlation Filter
- Statistics
- Crosstab
- Value Counter
- Mining
 - Bayes
 - Clustering
 - Rule Induction
 - Neural Network
 - Decision Tree
 - Misc Classifiers
 - Ensemble Learning
 - Item Sets / Association Rules
 - MDS
 - PCA
 - SVM
 - LIBSVM
 - LIBSVM Learner
 - LIBSVM Predictor
 - SVM Learner
 - SVM Predictor

Outline

File Reader (Node 1) → LIBSVM Learner (Node 10)

File Reader (Node 4) → LIBSVM Predictor (Node 12) → Scorer (Node 5)

Dialog - 2:10 - LIBSVM Learner

Options | Flow Variables | Memory Policy

Type of SVM: C-SVC

Kernel: radial basis function

radial basis function: $\exp(-\gamma|u-v|^2)$

Kernel Parameters

Degree: 3

Gamma: 0,1

Coef0: 0,0

SVM Parameters

Cost: 1,0

Nu: 0,5

Loss-Epsilon: 0,1

Cachesize (in MB): 303

Epsilon: 0,001

☒ Shrinking

☒ Probability Estimates

Target column: \$ class

OK Apply Cancel ?

Confusion Matrix - 2:5 - Scorer

File	Hilite			
class \ LIB...	Iris-setosa	Iris-versic...	Iris-virginica	
Iris-setosa	25	0	0	
Iris-versic...	0	24	1	
Iris-virginica	0	0	25	

Correct classified: 74

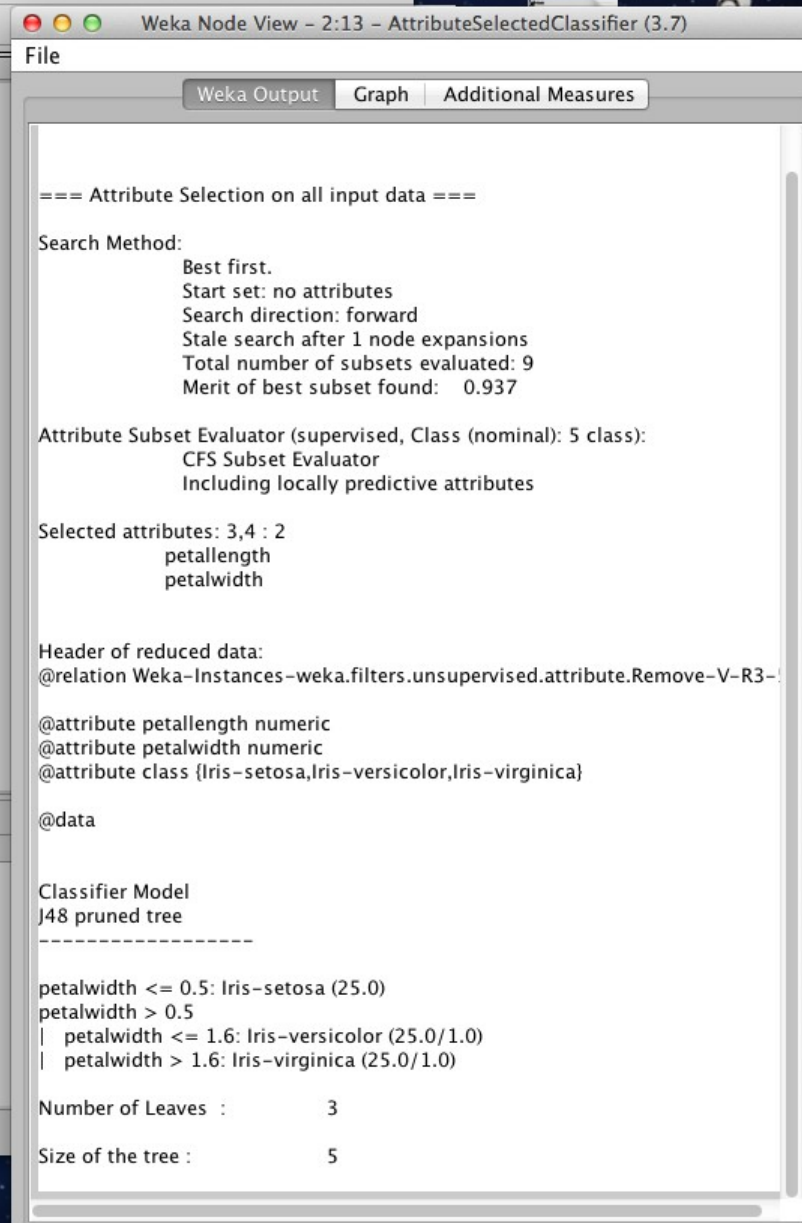
Accuracy: 98,667 %

Cohen's kappa (κ) 0,98

Wrong classified: 1

Error: 1,333 %

mata .26.35 foto.zip Lavori.



File	Hilite			
class \ Win...	Iris-setosa	Iris-versic...	Iris-virginica	
Iris-setosa	24	1	0	
Iris-versic...	0	24	1	
Iris-virginica	0	3	22	

Correct classified: 70	Wrong classified: 5
Accuracy: 93,333 %	Error: 6,667 %
Cohen's kappa (κ) 0,9	

KNIME - /Applications/knime/workspace

KNIME Explorer Workflow Proj... 100%

Node Repository

- Clustering
- Rule Induction
- Neural Network
 - MLP
 - MultiLayerPerceptron Predictor
 - RProp MLP Learner
 - PNN
- Decision Tree
 - Decision Tree Learner
 - Decision Tree Predictor
 - Decision Tree To Image
- Misc Classifiers
- Ensemble Learning
- Item Sets / Association Rules
- MDS
- PCA
 - PCA
 - PCA Compute
 - PCA Apply
 - PCA Inversion
- SVM
 - LIBSVM
 - SVM Learner
 - SVM Predictor
- Scoring
 - Enrichment Plotter
 - Entropy Scorer
 - Numeric Scorer

Workflow Diagram:

PCA Compute (Node 8) and PCA Apply (Node 10) are connected to File Reader (Node 1). PCA Apply (Node 10) is connected to RProp MLP Learner (Node 6). File Reader (Node 4) and PCA Apply (Node 9) are connected to MultiLayerPerceptron Predictor (Node 7). MultiLayerPerceptron Predictor (Node 7) is connected to Scorer (Node 5).

Dialog - 2:10 - PCA Apply

Options Flow Variables Memory Policy

☐ Fail if missing values are encountered (skipped by default)

Target dimensions

☒ Dimensions to reduce to 2 97% information preservation

☐ Minimum information fraction to preserve (%) 100 4 dimensions in output

☐ Replace original data columns

OK Apply Cancel ?

data the PCA was computed for initially.

Dialog Options

Fail if missing values are encountered

Spectral decomposition - 2:8 - PCA Compute

File

Table "spectral decomposition" - Rows: 4 Spec - Columns: 5 Properties Flow Variables

Row ID	D eigenvalue	D sepal length	D sepal width	D petal l...	D petal wi...
1. eigenvector	4.452	0.36	-0.098	0.859	0.352
2. eigenvector	0.283	-0.679	-0.709	0.166	0.093
3. eigenvector	0.089	-0.542	0.608	0.06	0.576
4. eigenvector	0.017	-0.34	0.342	0.481	-0.732

Outline Console

KNIME Co

WARN
WARN
WARN
WARN
WARN
WARN
WARN

KNIME Explorer Workflow Projects

- AEsposito_KNIME_project
- CristianoCaturano
- FINGERPRINT_ADAM 1
- IA-Workflow-Cirillo
- IA_contest_M63000268
- KNIME_DEMO
- KNIME_project
- KNIME_project2
- KNIME_project3

Node Repository

dec

- Mining
 - Decision Tree
 - Decision Tree Learner
 - Decision Tree Predictor
 - Decision Tree To Image
 - KNIME Labs
 - Decision Tree Ensemble
 - Tree Ensemble Learner
 - Tree Ensemble Predictor
 - Tree Ensemble Model Extract
 - Tree Ensemble Learner (Regression)
 - Tree Ensemble Predictor (Regression)
 - Weka
 - Weka (3.6)
 - Classification Algorithms
 - meta
 - Decorate (3.6)
 - trees
 - DecisionStump (3.6)
 - rules
 - DecisionTable (3.6)
 - Weka (3.7)
 - Classification Algorithms
 - meta
 - Decorate (3.7)
 - trees

*2: KNIME_DEMO *2.4 - Cross Validation

Node Description

```
graph LR; Input[Input Data] --> XPartitioner[X-Partitioner Node 2]; XPartitioner --> DTLearner[Decision Tree Learner Node 3]; XPartitioner --> DTPredictor[Decision Tree Predictor Node 4]; DTLearner --> XAggregator[X-Aggregator Node 1]; DTPredictor --> XAggregator; XAggregator --> Output[Output Data]
```

Outline

Console

Progress

KNIME Console

```
WARN Scorer Column Prediction (class) not found.
WARN Scorer Column Prediction (class) not found.
WARN 7) No target column specified. Target column was set
WARN Scorer Column LIBSVM_Class not found.
WARN 7) Could not find the attribute 'sepal length' in th
WARN 7) Could not find the attribute 'sepal length' in th
WARN 7) Could not find the attribute 'sepal length' in th
WARN Decision Tree Learner Guessing target column: "class".
WARN X-Aggregator No target column selected
```


KNIME Explorer

Workflow Projects

AEsposito_KNIME_project

CristianoCaturano

FINGERPRINT_ADAM 1

IA-Workflow-Cirillo

IA_contest_M63000268

KNIME_DEMO

KNIME_project

KNIME_project2

KNIME_project3

Node Repository

dec

Mining

Decision Tree

Decision Tree Learner

Decision Tree Predictor

Decision Tree To Image

KNIME Labs

Decision Tree Ensemble

Tree Ensemble Learner

Tree Ensemble Predictor

Tree Ensemble Model Extract

Tree Ensemble Learner (Regression)

Tree Ensemble Predictor (Regression)

Weka

Weka (3.6)

Classification Algorithms

meta

Decorate (3.6)

trees

DecisionStump (3.6)

rules

DecisionTable (3.6)

Weka (3.7)

Classification Algorithms

meta

Decorate (3.7)

trees

KNIME - /Applications/knime/workspace

*2: KNIME_DEMO

*2:4 - Cross Validation

File Reader

Node 1

Cross Validation

Node 4

Scorer

Node 5

Outline

File Reader

Cross Validation

Scorer

Node 1

Node 4

Node 5

Error rates - 2:4:1 - X-Aggregator

File

Table "default" - Rows: 10

Spec - Columns: 3

Row ID	Error i...	Size o...	Error...
fold 0	0	15	0
fold 1	6.667	15	1
fold 2	6.667	15	1
fold 3	0	15	0
fold 4	6.667	15	1
fold 5	6.667	15	1
fold 6	0	15	0
fold 7	6.667	15	1
fold 8	0	15	0
fold 9	13.333	15	2

Confusion Matrix - 2:5 - Scorer

File Hilite

class \ Pre...	Iris-setosa	Iris-versic...	Iris-virginica
Iris-setosa	50	0	0
Iris-versic...	0	47	3
Iris-virginica	0	4	46

Correct classified: 143

Accuracy: 95,333 %

Cohen's kappa (κ) 0,93

Wrong classified: 7

Error: 4,667 %

out-port reports a number of accuracy statistics such as True-Positives, False-Positives, True-Negatives, False-Negatives, Recall, Precision, Sensitivity, Specificity, F-measure, as well as the overall accuracy and Cohen's kappa.

column specified. Target column was set VM_Class not found.
ind the attribute 'sepal length' in th
ind the attribute 'sepal length' in th
ind the attribute 'sepal length' in th
rget column: "class".
olumn selected
er not found.
pply settings: java.lang.NullPointerEx