

# Package ‘RKEEL’

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**Type** Package

**Title** Using Keel in R Code

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## Description

KEEL is a popular Java software for a large number of different knowledge data discovery tasks. This package takes the advantages of KEEL and R, allowing to use KEEL algorithms in simple R code. The implemented R code layer between R and KEEL makes easy both using KEEL algorithms in R as implementing new algorithms for 'RKEEL' in a very simple way. It includes more than 100 algorithms for classification, regression and preprocess, which allows a more complete experimentation process. For more information about KEEL, see <<http://www.keel.es/>>.

**SystemRequirements** Java (>= 7.0)

**License** GPL

**Imports** R6, XML, doParallel, foreach, gdata, RKEELjars (>= 1.0.10), RKEELdata (>= 1.0.2)

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---

 ABB\_IEP\_FS

*ABB\_IEP\_FS KEEL Preprocess Algorithm*


---

### Description

ABB\_IEP\_FS Preprocess Algorithm from KEEL.

### Usage

ABB\_IEP\_FS(train, test, seed)

### Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::ABB_IEP_FS(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$preprocessed_test
```

---

AdaBoostNC\_C

*AdaBoostNC\_C KEEL Classification Algorithm*


---

**Description**

AdaBoostNC\_C Classification Algorithm from KEEL.

**Usage**

```
AdaBoostNC_C(train, test, pruned, confidence, instancesPerLeaf,
  numClassifiers, algorithm, trainMethod, lambda, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
pruned	pruned. Default value = TRUE
confidence	confidence. Default value = 0.25
instancesPerLeaf	instancesPerLeaf. Default value = 2
numClassifiers	numClassifiers. Default value = 10
algorithm	algorithm. Default value = "ADABOOST.NC"
trainMethod	trainMethod. Default value = "NORESAMPLING"
lambda	lambda. Default value = 2
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::AdaBoostNC_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

AllKNN\_TSS

*AllKNN\_TSS KEEL Preprocess Algorithm*


---

**Description**

AllKNN\_TSS Preprocess Algorithm from KEEL.

**Usage**

```
AllKNN_TSS(train, test, k, distance)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
k	k. Default value = 3
distance	distance. Default value = "Euclidean"

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::AllKNN_TSS(data_train, data_test)

#Run algorithm
```

```
algorithm$run()

#See results
algorithm$preprocessed_test
```

---

AllPosible\_MV

*AllPosible\_MV KEEL Preprocess Algorithm*

---

### Description

AllPosible\_MV Preprocess Algorithm from KEEL.

### Usage

```
AllPosible_MV(train, test)
```

### Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object

### Value

A data.frame with the preprocessed data for both train and test datasets.

### Examples

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::AllPosible_MV(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$preprocessed_test
```

---

ANR\_F

*ANR\_F KEEL Preprocess Algorithm*

---

### Description

ANR\_F Preprocess Algorithm from KEEL.

### Usage

```
ANR_F(train, test, seed)
```

### Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

### Value

A data.frame with the preprocessed data for both train and test datasets.

### Examples

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::ANR_F(data_train, data_test)

#Run algorithm
#algorithm$run()

#See results
#algorithm$preprocessed_test
```

---

ART\_C

*ART\_C KEEL Classification Algorithm*

---

### Description

ART\_C Classification Algorithm from KEEL.

### Usage

```
ART_C(train, test)
```



**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::ART_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

AssociativeClassificationAlgorithm  
*Associative Classification Algorithm*

---

**Description**

Class inheriting of ClassificationAlgorithm, to common methods for Associative Classification Algorithms.

---

Bayesian_D	<i>Bayesian_D KEEL Preprocess Algorithm</i>
------------	---

---

**Description**

Bayesian\_D Preprocess Algorithm from KEEL.

**Usage**

```
Bayesian_D(train, test)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::Bayesian_D(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$preprocessed_test
```

---

BNGE\_C

*BNGE\_C KEEL Classification Algorithm*

---

**Description**

BNGE\_C Classification Algorithm from KEEL.

**Usage**

```
BNGE_C(train, test, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::BNGE_C(data_train, data_test)

#Run algorithm
```

```

algorithm$run()

#See results
algorithm$testPredictions

```

---

Bojarczuk_GP_C	<i>Bojarczuk_GP_C KEEL Classification Algorithm</i>
----------------	---

---

## Description

Bojarczuk\_GP\_C Classification Algorithm from KEEL.

## Usage

```

Bojarczuk_GP_C(train, test, population_size, max_generations,
               max_deriv_size, rec_prob, copy_prob, seed)

```

## Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
population_size	population_size. Default value = 200
max_generations	max_generations. Default value = 200
max_deriv_size	max_deriv_size. Default value = 20
rec_prob	rec_prob. Default value = 0.8
copy_prob	copy_prob. Default value = 0.01
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

## Value

A data.frame with the actual and predicted classes for both train and test datasets.

## Examples

```

data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
#algorithm <- RKEEL::Bojarczuk_GP_C(data_train, data_test)
algorithm <- RKEEL::Bojarczuk_GP_C(data_train, data_test, population_size = 5, max_generations = 10)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions

```

---

BSE\_C                                    *BSE\_C KEEL Classification Algorithm*

---

### Description

BSE\_C Classification Algorithm from KEEL.

### Usage

```
BSE_C(train, test, k, distance)
```

### Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
k	k. Default value = 1
distance	distance. Default value = "Euclidean"

### Value

A data.frame with the actual and predicted classes for both train and test datasets.

### Examples

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::BSE_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

C45Binarization\_C                                    *C45Binarization\_C KEEL Classification Algorithm*

---

### Description

C45Binarization\_C Classification Algorithm from KEEL.

### Usage

```
C45Binarization_C(train, test, pruned, confidence, instancesPerLeaf,
  binarization, scoreFunction, bts)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
pruned	pruned. Default value = TRUE
confidence	confidence. Default value = 0.25
instancesPerLeaf	instancesPerLeaf. Default value = 2
binarization	binarization. Default value = "OVO"
scoreFunction	scoreFunction. Default value = "WEIGHTED"
bts	bts. Default value = 0.05

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```

data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::C45Binarization_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions

```

---

C45Rules\_C

*C45Rules\_C KEEL Classification Algorithm*


---

**Description**

C45Rules\_C Classification Algorithm from KEEL.

**Usage**

```

C45Rules_C(train, test, confidence, itemsetsPerLeaf, threshold,
seed)

```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
confidence	confidence. Default value = 0.25
itemssetsPerLeaf	itemssetsPerLeaf. Default value = 2
threshold	threshold. Default value = 10
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::C45Rules_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

C45\_C

*C45\_C KEEL Classification Algorithm*


---

**Description**

C45\_C Classification Algorithm from KEEL.

**Usage**

```
C45_C(train, test, pruned, confidence, instancesPerLeaf)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
pruned	pruned. Default value = TRUE
confidence	confidence. Default value = 0.25
instancesPerLeaf	instancesPerLeaf. Default value = 2

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::C45_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

CamNN\_C

*CamNN\_C KEEL Classification Algorithm*

---

**Description**

CamNN\_C Classification Algorithm from KEEL.

**Usage**

```
CamNN_C(train, test, k)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
k	k. Default value = 1

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::CamNN_C(data_train, data_test)

#Run algorithm
algorithm$run()
```

```
#See results
algorithm$testPredictions
```

---

CART\_C

*CART\_C KEEL Classification Algorithm*

---

### Description

CART\_C Classification Algorithm from KEEL.

### Usage

```
CART_C(train, test, maxDepth)
```

### Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
maxDepth	k. Default value = 90

### Value

A data.frame with the actual and predicted classes for both train and test datasets.

### Examples

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::CART_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```



---

CART_R	<i>CART_R KEEL Regression Algorithm</i>
--------	---

---

**Description**

CART\_R Regression Algorithm from KEEL.

**Usage**

```
CART_R(train, test, maxDepth)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
maxDepth	maxDepth. Default value = 90

**Value**

A data.frame with the actual and predicted values for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("autoMPG6_train")
data_test <- RKEEL::loadKeelDataset("autoMPG6_test")

#Create algorithm
algorithm <- RKEEL::CART_R(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

CenterNN_C	<i>CenterNN_C KEEL Classification Algorithm</i>
------------	---

---

**Description**

CenterNN\_C Classification Algorithm from KEEL.

**Usage**

```
CenterNN_C(train, test)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::CenterNN_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

CFAR\_C

---

*CFAR\_C KEEL Classification Algorithm*


---

**Description**

CFAR\_C Classification Algorithm from KEEL.

**Usage**

```
CFAR_C(train, test, min_support, min_confidence, threshold,
        num_labels, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
min_support	min_support. Default value = 0.1
min_confidence	min_confidence. Default value = 0.85
threshold	threshold. Default value = 0.15
num_labels	num_labels. Default value = 5
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::CFAR_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

CFKNN\_C

*CFKNN\_C KEEL Classification Algorithm*

---

**Description**

CFKNN\_C Classification Algorithm from KEEL.

**Usage**

```
CFKNN_C(train, test, k, alpha, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
k	k. Default value = 3
alpha	alpha. Default value = 0.6
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```

data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::CFKNN_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions

```

---

CHC\_C

*CHC\_C KEEL Classification Algorithm*


---

**Description**

CHC\_C Classification Algorithm from KEEL.

**Usage**

```

CHC_C(train, test, pop_size, evaluations, alfa, restart_change,
       prob_restart, prob_diverge, k, distance, seed)

```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
pop_size	pop_size. Default value = 50
evaluations	evaluations. Default value = 10000
alfa	alfa. Default value = 0.5
restart_change	restart_change. Default value = 0.35
prob_restart	prob_restart. Default value = 0.25
prob_diverge	prob_diverge. Default value = 0.05
k	k. Default value = 1
distance	distance. Default value = "Euclidean"
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```

data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::CHC_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions

```

---

ClassificationAlgorithm  
*Classification Algorithm*

---

**Description**

Class inheriting of KeelAlgorithm, to common methods for all KEEL Classification Algorithms. The specific classification algorithms must inherit of this class.

---

ClassificationResults *Classification Results*

---

**Description**

Class to calculate and store some results for a ClassificationAlgorithm. It receives as parameter the prediction of a classification algorithm as a data.frame object.

---

CleanAttributes\_TR *CleanAttributes\_TR KEEL Preprocess Algorithm*

---

**Description**

CleanAttributes\_TR Preprocess Algorithm from KEEL.

**Usage**

```
CleanAttributes_TR(train, test)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::CleanAttributes_TR(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$preprocessed_test
```

---

ClusterAnalysis\_D

*ClusterAnalysis\_D KEEL Preprocess Algorithm*

---

**Description**

ClusterAnalysis\_D Preprocess Algorithm from KEEL.

**Usage**

```
ClusterAnalysis_D(train, test)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::ClusterAnalysis_D(data_train, data_test)

#Run algorithm
#algorithm$run()

#See results
#algorithm$preprocessed_test
```

---

CNN_C	<i>CNN_C KEEL Classification Algorithm</i>
-------	--

---

### Description

CNN\_C Classification Algorithm from KEEL.

### Usage

```
CNN_C(train, test, k, distance, seed)
```

### Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
k	k. Default value = 1
distance	distance. Default value = "Euclidean"
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

### Value

A data.frame with the actual and predicted classes for both train and test datasets.

### Examples

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::CNN_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

CPW\_C

*CPW\_C KEEL Classification Algorithm*

---

### **Description**

CPW\_C Classification Algorithm from KEEL.

### **Usage**

```
CPW_C(train, test, beta, mu, ro, epsilon)
```

### **Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
beta	beta. Default value = 8.0
mu	mu. Default value = 0.001
ro	ro. Default value = 0.001
epsilon	epsilon. Default value = 0.001

### **Value**

A data.frame with the actual and predicted classes for both train and test datasets.

### **Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::CPW_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```



---

CW\_C

*CW\_C KEEL Classification Algorithm*

---

### **Description**

CW\_C Classification Algorithm from KEEL.

### **Usage**

```
CW_C(train, test, beta, mu, epsilon)
```

### **Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
beta	beta. Default value = 8.0
mu	mu. Default value = 0.001
epsilon	epsilon. Default value = 0.001

### **Value**

A data.frame with the actual and predicted classes for both train and test datasets.

### **Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::CW_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

C\_SVM\_C

*C\_SVM\_C KEEL Classification Algorithm***Description**

C\_SVM\_C Classification Algorithm from KEEL.

**Usage**

```
C_SVM_C(train, test, KernelType, C, eps, degree, gamma, coef0,
        nu, p, shrinking, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
KernelType	KernelType. Default value = "RBF"
C	C. Default value = 100.0
eps	eps. Default value = 0.001
degree	degree. Default value = 1
gamma	gamma. Default value = 0.01
coef0	coef0. Default value = 0.0
nu	nu. Default value = 0.1
p	p. Default value = 1.0
shrinking	shrinking. Default value = 1
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::C_SVM_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

DecimalScaling\_TR      *DecimalScaling\_TR KEEL Preprocess Algorithm*

---

**Description**

DecimalScaling\_TR Preprocess Algorithm from KEEL.

**Usage**

```
DecimalScaling_TR(train, test)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::DecimalScaling_TR(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$preprocessed_test
```

---

DecrRBFN\_C      *DecrRBFN\_C KEEL Classification Algorithm*

---

**Description**

DecrRBFN\_C Classification Algorithm from KEEL.

**Usage**

```
DecrRBFN_C(train, test, percent, num_neurons_ini, alfa, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
percent	percent. Default value = 0.1
num_neurons_ini	num_neurons_ini. Default value = 20
alfa	alfa. Default value = 0.3
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::DecrRBFN_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

Deeps\_C

*Deeps\_C KEEL Classification Algorithm*


---

**Description**

Deeps\_C Classification Algorithm from KEEL.

**Usage**

```
Deeps_C(train, test, beta)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
beta	beta. Default value = 0.12

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::Deeps_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

DSM\_C

*DSM\_C KEEL Classification Algorithm*


---

**Description**

DSM\_C Classification Algorithm from KEEL.

**Usage**

```
DSM_C(train, test, iterations, percentage, alpha_0, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
iterations	iterations. Default value = 100
percentage	percentage. Default value = 10
alpha_0	alpha_0. Default value = 0.1
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```

data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::DSM_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions

```

---

DT\_GA\_C

*DT\_GA\_C KEEL Classification Algorithm*


---

**Description**

DT\_GA\_C Classification Algorithm from KEEL.

**Usage**

```

DT_GA_C(train, test, confidence, instancesPerLeaf,
         geneticAlgorithmApproach, threshold, numGenerations,
         popSize, crossoverProb, mutProb, seed)

```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
confidence	confidence. Default value = 0.25
instancesPerLeaf	instancesPerLeaf. Default value = 2
geneticAlgorithmApproach	geneticAlgorithmApproach. Default value = "GA-LARGE-SN"
threshold	threshold. Default value = 10
numGenerations	numGenerations. Default value = 50
popSize	popSize. Default value = 200
crossoverProb	crossoverProb. Default value = 0.8
mutProb	mutProb. Default value = 0.01
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```

data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::DT_GA_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions

```

---

EPSILON\_SVR\_R

*EPSILON\_SVR\_R KEEL Regression Algorithm*


---

**Description**

EPSILON\_SVR\_R Regression Algorithm from KEEL.

**Usage**

```

EPSILON_SVR_R(train, test, KernelType, C, eps, degree, gamma,
  coef0, nu, p, shrinking, seed)

```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
KernelType	KernelType. Default value = "RBF"
C	C. Default value = 100.0
eps	eps. Default value = 0.001
degree	degree. Default value = 3
gamma	gamma. Default value = 0.01
coef0	coef0. Default value = 0.0
nu	nu. Default value = 0.5
p	p. Default value = 1.0
shrinking	shrinking. Default value = 0
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted values for both train and test datasets.

**Examples**

```

data_train <- RKEEL::loadKeelDataset("autoMPG6_train")
data_test <- RKEEL::loadKeelDataset("autoMPG6_test")

#Create algorithm
algorithm <- RKEEL::EPSILON_SVR_R(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions

```

Falco\_GP\_C

*Falco\_GP\_C KEEL Classification Algorithm***Description**

Falco\_GP\_C Classification Algorithm from KEEL.

**Usage**

```

Falco_GP_C(train, test, population_size, max_generations,
            max_deriv_size, rec_prob, mut_prob, copy_prob, alpha, seed)

```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
population_size	population_size. Default value = 200
max_generations	max_generations. Default value = 200
max_deriv_size	max_deriv_size. Default value = 20
rec_prob	rec_prob. Default value = 0.8
mut_prob	mut_prob. Default value = 0.1
copy_prob	copy_prob. Default value = 0.01
alpha	alpha. Default value = 0.9
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.



**Examples**

```

data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
#algorithm <- RKEEL::Falco_GP_C(data_train, data_test)
algorithm <- RKEEL::Falco_GP_C(data_train, data_test, population_size = 5, max_generations = 10)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions

```

FCRA\_C

*FCRA\_C KEEL Classification Algorithm***Description**

FCRA\_C Classification Algorithm from KEEL.

**Usage**

```

FCRA_C(train, test, generations, pop_size, length_S_C, WCAR,
        WV, crossover_prob, mut_prob, n1, n2, max_iter,
        linguistic_values, seed)

```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
generations	generations. Default value = 50
pop_size	pop_size. Default value = 30
length_S_C	length_S_C. Default value = 10
WCAR	WCAR. Default value = 10.0
WV	WV. Default value = 1.0
crossover_prob	crossover_prob. Default value = 1.0
mut_prob	mut_prob. Default value = 0.01
n1	n1. Default value = 0.001
n2	n2. Default value = 0.1
max_iter	max_iter. Default value = 100
linguistic_values	linguistic_values. Default value = 5
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::FCRA_C(data_train, data_test)

#Run algorithm
#algorithm$run()

#See results
#algorithm$testPredictions
```

---

FRNN\_C

*FRNN\_C KEEL Classification Algorithm*


---

**Description**

FRNN\_C Classification Algorithm from KEEL.

**Usage**

```
FRNN_C(train, test)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::FRNN_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

FRSBM_R	<i>FRSBM_R KEEL Regression Algorithm</i>
---------	--

---

## Description

FRSBM\_R Regression Algorithm from KEEL.

## Usage

```
FRSBM_R(train, test, numrules, sigma, seed)
```

## Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
numrules	numrules. Default value = 1
sigma	sigma. Default value = 0.0001
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

## Value

A data.frame with the actual and predicted values for both train and test datasets.

## Examples

```
data_train <- RKEEL::loadKeelDataset("autoMPG6_train")
data_test <- RKEEL::loadKeelDataset("autoMPG6_test")

#Create algorithm
algorithm <- RKEEL::FRSBM_R(data_train, data_test)

#Run algorithm
#algorithm$run()

#See results
#algorithm$testPredictions
```

---

FURIA\_C

*FURIA\_C KEEL Classification Algorithm*

---

### Description

FURIA\_C Classification Algorithm from KEEL.

### Usage

```
FURIA_C(train, test, optimizations, folds, seed)
```

### Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
optimizations	optimizations. Default value = 2
folds	folds. Default value = 3
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

### Value

A data.frame with the actual and predicted classes for both train and test datasets.

### Examples

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::FURIA_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

**Description**

FuzzyFARCHD\_C Classification Algorithm from KEEL.

**Usage**

```
FuzzyFARCHD_C(train, test, linguistic_values, min_support,
               max_confidence, depth_max, K, max_evaluations, pop_size,
               alpha, bits_per_gen, inference_type, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
linguistic_values	linguistic_values. Default value = 5
min_support	min_support. Default value = 0.05
max_confidence	max_confidence. Default value = 0.8
depth_max	depth_max. Default value = 3
K	K. Default value = 2
max_evaluations	max_evaluations. Default value = 15000
pop_size	pop_size. Default value = 50
alpha	alpha. Default value = 0.15
bits_per_gen	bits_per_gen. Default value = 30
inference_type	inference_type. Default value = 1
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test  <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::FuzzyFARCHD_C(data_train, data_test)

#Run algorithm
```

```

algorithm$run()

#See results
algorithm$testPredictions

```

---

FuzzyKNN\_C

*FuzzyKNN\_C KEEL Classification Algorithm*


---

### Description

FuzzyKNN\_C Classification Algorithm from KEEL.

### Usage

```
FuzzyKNN_C(train, test, k, M, initialization, init_k)
```

### Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
k	k. Default value = 3
M	M. Default value = 2.0
initialization	initialization. Default value = "CRISP"
init_k	init_k. Default value = 3

### Value

A data.frame with the actual and predicted classes for both train and test datasets.

### Examples

```

data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::FuzzyKNN_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions

```

---

FuzzyNPC\_C

*FuzzyNPC\_C KEEL Classification Algorithm*

---

### Description

FuzzyNPC\_C Classification Algorithm from KEEL.

### Usage

```
FuzzyNPC_C(train, test, M)
```

### Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
M	M. Default value = 2.0

### Value

A data.frame with the actual and predicted classes for both train and test datasets.

### Examples

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::FuzzyNPC_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

GANN\_C

*GANN\_C KEEL Classification Algorithm*

---

### Description

GANN\_C Classification Algorithm from KEEL.

**Usage**

```
GANN_C(train, test, hidden_layers, hidden_nodes, transfer, eta,
        alpha, lambda, test_data, validation_data, cross_validation,
        BP_cycles, improve, tipify_inputs, save_all, elite,
        num_individuals, w_range, connectivity, P_bp, P_param,
        P_struct, max_generations, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
hidden_layers	hidden_layers. Default value = 2
hidden_nodes	hidden_nodes. Default value = 15
transfer	transfer. Default value = "Htan"
eta	eta. Default value = 0.15
alpha	alpha. Default value = 0.1
lambda	lambda. Default value = 0.0
test_data	test_data. Default value = TRUE
validation_data	validation_data. Default value = FALSE
cross_validation	cross_validation. Default value = FALSE
BP_cycles	BP_cycles. Default value = 10000
improve	improve. Default value = 0.01
tipify_inputs	tipify_inputs. Default value = TRUE
save_all	save_all. Default value = FALSE
elite	elite. Default value = 0.1
num_individuals	num_individuals. Default value = 100
w_range	w_range. Default value = 5.0
connectivity	connectivity. Default value = 0.5
P_bp	P_bp. Default value = 0.25
P_param	P_param. Default value = 0.1
P_struct	P_struct. Default value = 0.1
max_generations	max_generations. Default value = 100
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.



**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::GANN_C(data_train, data_test)

#Run algorithm
#algorithm$run()

#See results
#algorithm$testPredictions
```

---

```
getAttributeLinesFromDataframes
```

*Get attribute lines from data.frames*

---

**Description**

Method for getting the attribute lines from data.frame objects

**Usage**

```
getAttributeLinesFromDataframes(trainData, testData)
```

**Arguments**

trainData	Train dataset as data.frame
testData	Test dataset as data.frame

**Value**

Returns a list with the attribute names and types

**Examples**

```
iris_train <- RKEEL::loadKeelDataset("iris_train")
iris_test <- RKEEL::loadKeelDataset("iris_test")

attributeLines <- getAttributeLinesFromDataframes(iris_train, iris_test)
```

---

`GFS_AdaBoost_C`*GFS\_AdaBoost\_C KEEL Classification Algorithm*

---

**Description**

GFS\_AdaBoost\_C Classification Algorithm from KEEL.

**Usage**

```
GFS_AdaBoost_C(train, test, numLabels, numRules, seed)
```

**Arguments**

<code>train</code>	Train dataset as a data.frame object
<code>test</code>	Test dataset as a data.frame object
<code>numLabels</code>	numLabels. Default value = 3
<code>numRules</code>	numRules. Default value = 8
<code>seed</code>	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::GFS_AdaBoost_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

**Description**

GFS\_GP\_R Regression Algorithm from KEEL.

**Usage**

```
GFS_GP_R(train, test, numLabels, numRules, popSize, numisland,
  steady, numIter, tourSize, mutProb, aplMut, probMigra,
  probOptimLocal, numOptimLocal, idOptimLocal, nichinggap,
  maxindniche, probintraniche, probcrosssga, probmutaga,
  lenchaingap, maxtreeheight, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
numLabels	numLabels. Default value = 3
numRules	numRules. Default value = 8
popSize	popSize. Default value = 30
numisland	numisland. Default value = 2
steady	steady. Default value = 1
numIter	numIter. Default value = 100
tourSize	tourSize. Default value = 4
mutProb	mutProb. Default value = 0.01
aplMut	aplMut. Default value = 0.1
probMigra	probMigra. Default value = 0.001
probOptimLocal	probOptimLocal. Default value = 0.00
numOptimLocal	numOptimLocal. Default value = 0
idOptimLocal	idOptimLocal. Default value = 0
nichinggap	nichinggap. Default value = 0
maxindniche	maxindniche. Default value = 8
probintraniche	probintraniche. Default value = 0.75
probcrosssga	probcrosssga. Default value = 0.5
probmutaga	probmutaga. Default value = 0.5
lenchaingap	lenchaingap. Default value = 10
maxtreeheight	maxtreeheight. Default value = 8
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted values for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("autoMPG6_train")
data_test <- RKEEL::loadKeelDataset("autoMPG6_test")

#Create algorithm
algorithm <- RKEEL::GFS_GP_R(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

GFS\_GSP\_R

*GFS\_GSP\_R KEEL Regression Algorithm*


---

**Description**

GFS\_GSP\_R Regression Algorithm from KEEL.

**Usage**

```
GFS_GSP_R(train, test, numLabels, numRules, deltafitsap,
  p0sap, p1sap, amplMut, nsubsap, probOptimLocal,
  numOptimLocal, idOptimLocal, probcrosssga, probmutaga,
  lenchaingap, maxtreeheight, numItera, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
numLabels	numLabels. Default value = 3
numRules	numRules. Default value = 8
deltafitsap	deltafitsap. Default value = 0.5
p0sap	p0sap. Default value = 0.5
p1sap	p1sap. Default value = 0.5
amplMut	amplMut. Default value = 0.1
nsubsap	nsubsap. Default value = 10
probOptimLocal	probOptimLocal. Default value = 0.00
numOptimLocal	numOptimLocal. Default value = 0

idOptimLocal	idOptimLocal. Default value = 0
probcrossga	probcrossga. Default value = 0.5
probmutaga	probmutaga. Default value = 0.5
lenchaingap	lenchaingap. Default value = 10
maxtreeheight	maxtreeheight. Default value = 8
numItera	numItera. Default value = 10000
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted values for both train and test datasets.

**Examples**

```

data_train <- RKEEL::loadKeelDataset("autoMPG6_train")
data_test <- RKEEL::loadKeelDataset("autoMPG6_test")

#Create algorithm
#algorithm <- RKEEL::GFS_GSP_R(data_train, data_test)
algorithm <- RKEEL::GFS_GSP_R(data_train, data_test, numRules = 2, numItera = 10, maxtreeheight = 2)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions

```

---

GFS\_LogitBoost\_C

*GFS\_LogitBoost\_C KEEL Classification Algorithm*


---

**Description**

GFS\_LogitBoost\_C Classification Algorithm from KEEL.

**Usage**

```
GFS_LogitBoost_C(train, test, numLabels, numRules, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
numLabels	numLabels. Default value = 3
numRules	numRules. Default value = 25
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::GFS_LogitBoost_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

GFS\_RB\_MF\_R

*GFS\_RB\_MF\_R KEEL Regression Algorithm*


---

**Description**

GFS\_RB\_MF\_R Regression Algorithm from KEEL.

**Usage**

```
GFS_RB_MF_R(train, test, numLabels, popSize, generations,
             crossProb, mutProb, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
numLabels	numLabels. Default value = 3
popSize	popSize. Default value = 50
generations	generations. Default value = 100
crossProb	crossProb. Default value = 0.9
mutProb	mutProb. Default value = 0.1
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted values for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("autoMPG6_train")
data_test <- RKEEL::loadKeelDataset("autoMPG6_test")

#Create algorithm
#algorithm <- RKEEL::GFS_RB_MF_R(data_train, data_test)
algorithm <- RKEEL::GFS_RB_MF_R(data_train, data_test, popSize = 5, generations = 10)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

hasContinuousData	<i>Has Continuous Data</i>
-------------------	----------------------------

---

**Description**

Method for check if a dataset has continuous data

**Usage**

```
hasContinuousData(data)
```

**Arguments**

data	Dataset as data.frame
------	-----------------------

**Value**

Returns TRUE if the dataset has continuous data and FALSE if it has not.

**Examples**

```
iris <- RKEEL::loadKeelDataset("iris")
hasContinuousData(iris)
```

---

hasMissingValues	<i>Has Missing Values</i>
------------------	---------------------------

---

**Description**

Method for check if a dataset has missing values

**Usage**

```
hasMissingValues(data)
```

**Arguments**

data	Dataset as data.frame
------	-----------------------

**Value**

Returns TRUE if the dataset has missing values and FALSE if it has not.

**Examples**

```
iris <- RKEEL::loadKeelDataset("iris")
hasMissingValues(iris)
```

---

ID3_C	<i>ID3_C KEEL Classification Algorithm</i>
-------	--

---

**Description**

ID3\_C Classification Algorithm from KEEL.

**Usage**

```
ID3_C(train, test)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.



**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::ID3_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

ID3\_D

*ID3\_D KEEL Preprocess Algorithm*

---

**Description**

ID3\_D Preprocess Algorithm from KEEL.

**Usage**

```
ID3_D(train, test)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::ID3_D(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$preprocessed_test
```

---

`IF_KNN_C`*IF\_KNN\_C KEEL Classification Algorithm*

---

**Description**

IF\_KNN\_C Classification Algorithm from KEEL.

**Usage**

```
IF_KNN_C(train, test, K, mA, vA, mR, vR, k)
```

**Arguments**

<code>train</code>	Train dataset as a data.frame object
<code>test</code>	Test dataset as a data.frame object
<code>K</code>	K. Default value = 3
<code>mA</code>	mA. Default value = 0.6
<code>vA</code>	vA. Default value = 0.4
<code>mR</code>	mR. Default value = 0.3
<code>vR</code>	vR. Default value = 0.7
<code>k</code>	k. Default value = 5

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::IF_KNN_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

Ignore_MV	<i>Ignore_MV KEEL Preprocess Algorithm</i>
-----------	--

---

**Description**

Ignore\_MV Preprocess Algorithm from KEEL.

**Usage**

```
Ignore_MV(train, test)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::Ignore_MV(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$preprocessed_test
```

---

IncrRBFN_C	<i>IncrRBFN_C KEEL Classification Algorithm</i>
------------	---

---

**Description**

IncrRBFN\_C Classification Algorithm from KEEL.

**Usage**

```
IncrRBFN_C(train, test, epsilon, alfa, delta, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
epsilon	epsilon. Default value = 0.1
alfa	alfa. Default value = 0.3
delta	delta. Default value = 0.5
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::IncrRBFN_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

isMultiClass

*Is Multi-class*


---

**Description**

Method for check if a dataset is multi-class

**Usage**

```
isMultiClass(data)
```

**Arguments**

data	Dataset as data.frame
------	-----------------------

**Value**

Returns TRUE if the dataset is multi-class and FALSE if it is not.

**Examples**

```
iris <- RKEEL::loadKeelDataset("iris")
isMultiClass(iris)
```

---

IterativePartitioningFilter\_F

*IterativePartitioningFilter\_F KEEL Preprocess Algorithm*

---

**Description**

IterativePartitioningFilter\_F Preprocess Algorithm from KEEL.

**Usage**

```
IterativePartitioningFilter_F(train, test, numPartitions,
  filterType, confidence, itemsetsPerLeaf, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
numPartitions	numPartitions. Default value = 5
filterType	filterType. Default value = "consensus"
confidence	confidence. Default value = 0.25
itemsetsPerLeaf	itemsetsPerLeaf. Default value = 2
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::IterativePartitioningFilter_F(data_train, data_test)

#Run algorithm
#algorithm$run()

#See results
#algorithm$preprocessed_test
```

---

`JFKNN_C`*JFKNN\_C KEEL Classification Algorithm*

---

**Description**

JFKNN\_C Classification Algorithm from KEEL.

**Usage**

```
JFKNN_C(train, test)
```

**Arguments**

<code>train</code>	Train dataset as a data.frame object
<code>test</code>	Test dataset as a data.frame object

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::JFKNN_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

`KeelAlgorithm`*Keel Algorithm*

---

**Description**

Principal class for implementing KEEL Algorithms. The distinct types of algorithms must inherit of this class.

---

Kernel_C	<i>Kernel_C KEEL Classification Algorithm</i>
----------	---

---

**Description**

Kernel\_C Classification Algorithm from KEEL.

**Usage**

```
Kernel_C(train, test, sigma, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
sigma	sigma. Default value = 0.01
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::Kernel_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

KMeans_MV	<i>KMeans_MV KEEL Preprocess Algorithm</i>
-----------	--

---

**Description**

KMeans\_MV Preprocess Algorithm from KEEL.

**Usage**

```
KMeans_MV(train, test, k, error, iterations, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
k	k. Default value = 10
error	error. Default value = 100
iterations	iterations. Default value = 100
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::KMeans_MV(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$preprocessed_test
```

---

KNN\_C

*KNN-C KEEL Classification Algorithm*


---

**Description**

KNN-C Classification Algorithm from KEEL.

**Usage**

```
KNN_C(train, test, k, distance)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
k	Number of neighbors
distance	Distance function



**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::KNN_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

KNN\_MV

*KNN\_MV KEEL Preprocess Algorithm*


---

**Description**

KNN\_MV Preprocess Algorithm from KEEL.

**Usage**

```
KNN_MV(train, test, k)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
k	k. Default value = 10

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::KNN_MV(data_train, data_test)

#Run algorithm
algorithm$run()
```

```
#See results
algorithm$preprocessed_test
```

---

KSNN\_C

*KSNN\_C KEEL Classification Algorithm*

---

### Description

KSNN\_C Classification Algorithm from KEEL.

### Usage

```
KSNN_C(train, test, k)
```

### Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
k	k. Default value = 1

### Value

A data.frame with the actual and predicted classes for both train and test datasets.

### Examples

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::KSNN_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

KStar\_C

*KStar\_C KEEL Classification Algorithm*

---

### Description

KStar\_C Classification Algorithm from KEEL.

### Usage

```
KStar_C(train, test, selection_method, blend, seed)
```

### Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
selection_method	selection_method. Default value = "Fixed"
blend	blend. Default value = 0.2
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

### Value

A data.frame with the actual and predicted classes for both train and test datasets.

### Examples

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::KStar_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

LDA\_C                      *LDA\_C KEEL Classification Algorithm*

---

**Description**

LDA\_C Classification Algorithm from KEEL.

**Usage**

```
LDA_C(train, test, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::LDA_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

LinearLMS\_C                      *LinearLMS\_C KEEL Classification Algorithm*

---

**Description**

LinearLMS\_C Classification Algorithm from KEEL.

**Usage**

```
LinearLMS_C(train, test, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::LinearLMS_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

 LinearLMS\_R

---

*LinearLMS\_R KEEL Regression Algorithm*


---

**Description**

LinearLMS\_R Regression Algorithm from KEEL.

**Usage**

```
LinearLMS_R(train, test, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted values for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("autoMPG6_train")
data_test <- RKEEL::loadKeelDataset("autoMPG6_test")

#Create algorithm
algorithm <- RKEEL::LinearLMS_R(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

loadKeelDataset	<i>Load KEEL Dataset</i>
-----------------	--------------------------

---

**Description**

Loads a dataset of the KEEL datasets repository. The included datasets names are available at the `getKeelDatasetList` method of `RKEELdata`.

**Usage**

```
loadKeelDataset(dataName)
```

**Arguments**

`dataName`      String with the correct data name of one of the KEEL datasets

**Value**

Returns a `data.frame` with the KEEL dataset.

**Examples**

```
RKEEL::loadKeelDataset("iris")
```

---

Logistic_C	<i>Logistic_C KEEL Classification Algorithm</i>
------------	---

---

**Description**

Logistic\_C Classification Algorithm from KEEL.

**Usage**

```
Logistic_C(train, test, ridge, maxIter)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
ridge	ridge. Default value = 1e-8
maxIter	maxIter. Default value = -1

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::Logistic_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

LVF_IEP_FS	<i>LVF_IEP_FS KEEL Preprocess Algorithm</i>
------------	---

---

**Description**

LVF\_IEP\_FS Preprocess Algorithm from KEEL.

**Usage**

```
LVF_IEP_FS(train, test, paramKNN, maxLoops, inconAllow, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
paramKNN	paramKNN. Default value = 1
maxLoops	maxLoops. Default value = 770
inconAllow	inconAllow. Default value = 0
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
#algorithm <- RKEEL::LVF_IEP_FS(data_train, data_test)
algorithm <- RKEEL::LVF_IEP_FS(data_train, data_test, maxLoops = 30)

#Run algorithm
algorithm$run()

#See results
algorithm$preprocessed_test
```

---

M5Rules\_R

*M5Rules\_R KEEL Regression Algorithm*


---

**Description**

M5Rules\_R Regression Algorithm from KEEL.

**Usage**

```
M5Rules_R(train, test, pruningFactor, heuristic)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
pruningFactor	pruningFactor. Default value = 2
heuristic	heuristic. Default value = "Coverage"



**Value**

A data.frame with the actual and predicted values for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("autoMPG6_train")
data_test <- RKEEL::loadKeelDataset("autoMPG6_test")

#Create algorithm
algorithm <- RKEEL::M5Rules_R(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

M5\_R

*M5\_R KEEL Regression Algorithm*

---

**Description**

M5\_R Regression Algorithm from KEEL.

**Usage**

```
M5_R(train, test, type, pruningFactor, unsmoothed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
type	type. Default value = "m"
pruningFactor	pruningFactor. Default value = 2
unsmoothed	unsmoothed. Default value = TRUE

**Value**

A data.frame with the actual and predicted values for both train and test datasets.

**Examples**

```

data_train <- RKEEL::loadKeelDataset("autoMPG6_train")
data_test <- RKEEL::loadKeelDataset("autoMPG6_test")

#Create algorithm
algorithm <- RKEEL::M5_R(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions

```

---

MinMax\_TR

*MinMax\_TR KEEL Preprocess Algorithm*


---

**Description**

MinMax\_TR Preprocess Algorithm from KEEL.

**Usage**

```
MinMax_TR(train, test, newMin, newMax)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
newMin	newMin. Default value = 0.0
newMax	newMax. Default value = 1.0

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```

data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::MinMax_TR(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$preprocessed_test

```

**Description**

MLP\_BP\_C Classification Algorithm from KEEL.

**Usage**

```
MLP_BP_C(train, test, hidden_layers, hidden_nodes, transfer,
eta, alpha, lambda, test_data, validation_data,
cross_validation, cycles, improve, tipify_inputs,
save_all, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
hidden_layers	hidden_layers. Default value = 2
hidden_nodes	hidden_nodes. Default value = 15
transfer	transfer. Default value = "Htan"
eta	eta. Default value = 0.15
alpha	alpha. Default value = 0.1
lambda	lambda. Default value = 0.0
test_data	test_data. Default value = TRUE
validation_data	validation_data. Default value = FALSE
cross_validation	cross_validation. Default value = FALSE
cycles	cycles. Default value = 10000
improve	improve. Default value = 0.01
tipify_inputs	tipify_inputs. Default value = TRUE
save_all	save_all. Default value = FALSE
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```

data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::MLP_BP_C(data_train, data_test, )

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions

```

MLP\_BP\_R

*MLP\_BP\_R KEEL Regression Algorithm***Description**

MLP\_BP\_R Regression Algorithm from KEEL.

**Usage**

```

MLP_BP_R(train, test, hidden_layers, hidden_nodes, transfer,
eta, alpha, lambda, test_data, validation_data,
cross_validation, cycles, improve, tipify_inputs,
save_all, seed)

```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
hidden_layers	hidden_layers. Default value = 2
hidden_nodes	hidden_nodes. Default value = 15
transfer	transfer. Default value = "Htan"
eta	eta. Default value = 0.15
alpha	alpha. Default value = 0.1
lambda	lambda. Default value = 0.0
test_data	test_data. Default value = TRUE
validation_data	validation_data. Default value = FALSE
cross_validation	cross_validation. Default value = FALSE
cycles	cycles. Default value = 10000
improve	improve. Default value = 0.01

```

tipify_inputs  tipify_inputs. Default value = TRUE
save_all       save_all. Default value = FALSE
seed           Seed for random numbers. If it is not assigned a value, the seed will be a random
               number

```

**Value**

A data.frame with the actual and predicted values for both train and test datasets.

**Examples**

```

data_train <- RKEEL::loadKeelDataset("autoMPG6_train")
data_test  <- RKEEL::loadKeelDataset("autoMPG6_test")

#Create algorithm
algorithm <- RKEEL::MLP_BP_R(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions

```

---

ModelCS\_TSS

*ModelCS\_TSS KEEL Preprocess Algorithm*


---

**Description**

ModelCS\_TSS Preprocess Algorithm from KEEL.

**Usage**

```
ModelCS_TSS(train, test, k, distance)
```

**Arguments**

```

train          Train dataset as a data.frame object
test           Test dataset as a data.frame object
k              k. Default value = 3
distance       distance. Default value = "Euclidean"

```

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::ModelCS_TSS(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$preprocessed_test
```

---

MostCommon\_MV

*MostCommon\_MV KEEL Preprocess Algorithm*

---

**Description**

MostCommon\_MV Preprocess Algorithm from KEEL.

**Usage**

```
MostCommon_MV(train, test)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::MostCommon_MV(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$preprocessed_test
```

---

NB\_C

*NB\_C KEEL Classification Algorithm*

---

**Description**

NB\_C Classification Algorithm from KEEL.

**Usage**

```
NB_C(train, test)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::NB_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

NM\_C

*NM\_C KEEL Classification Algorithm*

---

**Description**

NM\_C Classification Algorithm from KEEL.

**Usage**

```
NM_C(train, test)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::NM_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

NNEP\_C

*NNEP\_C KEEL Classification Algorithm*


---

**Description**

NNEP\_C Classification Algorithm from KEEL.

**Usage**

```
NNEP_C(train, test, hidden_nodes, transfer, generations, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
hidden_nodes	hidden_nodes. Default value = 4
transfer	transfer. Default value = "Product_Unit"
generations	generations. Default value = 200
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.



**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
#algorithm <- RKEEL::NNEP_C(data_train, data_test)
algorithm <- RKEEL::NNEP_C(data_train, data_test, generations = 5)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

Nominal2Binary\_TR      *Nominal2Binary\_TR KEEL Preprocess Algorithm*

---

**Description**

Nominal2Binary\_TR Preprocess Algorithm from KEEL.

**Usage**

```
Nominal2Binary_TR(train, test)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::Nominal2Binary_TR(data_train, data_test)

#Run algorithm
#algorithm$run()

#See results
#algorithm$preprocessed_test
```

---

 NU\_SVM\_C

*NU\_SVM\_C KEEL Classification Algorithm*


---

**Description**

NU\_SVM\_C Classification Algorithm from KEEL.

**Usage**

```
NU_SVM_C(train, test, KernelType, C, eps, degree, gamma, coef0,
          nu, p, shrinking, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
KernelType	KernelType. Default value = 1
C	C. Default value = "RBF"
eps	eps. Default value = 1000.0
degree	degree. Default value = 0.001
gamma	gamma. Default value = 10
coef0	coef0. Default value = 0.01
nu	nu. Default value = 0.1
p	p. Default value = 1.0
shrinking	shrinking. Default value = 1
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::NU_SVM_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

 NU\_SVR\_R

*NU\_SVR\_R KEEL Regression Algorithm*


---

**Description**

NU\_SVR\_R Regression Algorithm from KEEL.

**Usage**

```
NU_SVR_R(train, test, KernelType, C, eps, degree, gamma,
         coef0, nu, p, shrinking, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
KernelType	KernelType. Default value = ?
C	C. Default value = ?
eps	eps. Default value = ?
degree	degree. Default value = ?
gamma	gamma. Default value = ?
coef0	coef0. Default value = ?
nu	nu. Default value = ?
p	p. Default value = ?
shrinking	shrinking. Default value = ?
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted values for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("autoMPG6_train")
data_test <- RKEEL::loadKeelDataset("autoMPG6_test")

#Create algorithm
algorithm <- RKEEL::NU_SVR_R(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

PART\_C

*PART\_C KEEL Classification Algorithm*

---

### Description

PART\_C Classification Algorithm from KEEL.

### Usage

```
PART_C(train, test, confidence, itemsetsPerLeaf)
```

### Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
confidence	confidence. Default value = 0.25
itemsetsPerLeaf	itemsetsPerLeaf. Default value = 2

### Value

A data.frame with the actual and predicted classes for both train and test datasets.

### Examples

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::PART_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

PDFC\_C

*PDFC\_C KEEL Classification Algorithm*

---

### Description

PDFC\_C Classification Algorithm from KEEL.

**Usage**

```
PDFC_C(train, test, C, d, tolerance, epsilon, PDRFtype,  
        nominal_to_binary, preprocess_type, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
C	C. Default value = 100.0
d	d. Default value = 0.25
tolerance	tolerance. Default value = 0.001
epsilon	epsilon. Default value = 1.0E-12
PDRFtype	PDRFtype. Default value = "Gaussian"
nominal_to_binary	nominal_to_binary. Default value = TRUE
preprocess_type	preprocess_type. Default value = "Normalize"
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")  
data_test <- RKEEL::loadKeelDataset("iris_test")  
  
#Create algorithm  
algorithm <- RKEEL::PDFC_C(data_train, data_test)  
  
#Run algorithm  
algorithm$run()  
  
#See results  
algorithm$testPredictions
```

---

PFKNN\_C

*PFKNN\_C KEEL Classification Algorithm*

---

### Description

PFKNN\_C Classification Algorithm from KEEL.

### Usage

```
PFKNN_C(train, test, k, seed)
```

### Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
k	k. Default value = 3
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

### Value

A data.frame with the actual and predicted classes for both train and test datasets.

### Examples

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::PFKNN_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

PNN\_C

*PNN\_C KEEL Classification Algorithm*

---

### Description

PNN\_C Classification Algorithm from KEEL.

**Usage**

```
PNN_C(train, test, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::PNN_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

PolQuadraticLMS\_C      *PolQuadraticLMS\_C KEEL Classification Algorithm*

---

**Description**

PolQuadraticLMS\_C Classification Algorithm from KEEL.

**Usage**

```
PolQuadraticLMS_C(train, test, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::PolQuadraticLMS_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

PolQuadraticLMS\_R      *PolQuadraticLMS\_R KEEL Regression Algorithm*

---

**Description**

PolQuadraticLMS\_R Regression Algorithm from KEEL.

**Usage**

```
PolQuadraticLMS_R(train, test, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted values for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("autoMPG6_train")
data_test <- RKEEL::loadKeelDataset("autoMPG6_test")

#Create algorithm
algorithm <- RKEEL::PolQuadraticLMS_R(data_train, data_test)

#Run algorithm
```



```

algorithm$run()

#See results
algorithm$testPredictions

```

---

POP\_TSS

*POP\_TSS KEEL Preprocess Algorithm*


---

### Description

POP\_TSS Preprocess Algorithm from KEEL.

### Usage

```
POP_TSS(train, test)
```

### Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object

### Value

A data.frame with the preprocessed data for both train and test datasets.

### Examples

```

data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::POP_TSS(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$preprocessed_test

```

---

PreprocessAlgorithm

*Preprocess Algorithm*


---

### Description

Class inheriting of KeelAlgorithm, to common methods for all KEEL Preprocess Algorithms. The specific preprocessing algorithms must inherit of this class.

---

PRISM\_C

*PRISM\_C KEEL Classification Algorithm*

---

### Description

PRISM\_C Classification Algorithm from KEEL.

### Usage

```
PRISM_C(train, test, seed)
```

### Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

### Value

A data.frame with the actual and predicted classes for both train and test datasets.

### Examples

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::PRISM_C(data_train, data_test)

#Run algorithm
#algorithm$run()

#See results
#algorithm$testPredictions
```

---

Proportional\_D

*Proportional\_D KEEL Preprocess Algorithm*

---

### Description

Proportional\_D Preprocess Algorithm from KEEL.

### Usage

```
Proportional_D(train, test, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::Proportional_D(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$preprocessed_test
```

---

PSO\_ACO\_C

*PSO\_ACO\_C KEEL Classification Algorithm*


---

**Description**

PSO\_ACO\_C Classification Algorithm from KEEL.

**Usage**

```
PSO_ACO_C(train, test, max_uncovered_samples, min_saples_by_rule,
  max_iterations_without_converge, enviromentSize, numParticles,
  x, c1, c2, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
max_uncovered_samples	max_uncovered_samples. Default value = 20
min_saples_by_rule	min_saples_by_rule. Default value = 2
max_iterations_without_converge	max_iterations_without_converge. Default value = 100

enviromentSize	enviromentSize. Default value = 3
numParticles	numParticles. Default value = 100
x	x. Default value = 0.72984
c1	c1. Default value = 2.05
c2	c2. Default value = 2.05
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::PSO_ACO_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

PSRCG\_TSS

*PSRCG\_TSS KEEL Preprocess Algorithm*


---

**Description**

PSRCG\_TSS Preprocess Algorithm from KEEL.

**Usage**

```
PSRCG_TSS(train, test, distance)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
distance	distance. Default value = "Euclidean"

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::PSRCG_TSS(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$preprocessed_test
```

---

PUBLIC\_C

*PUBLIC\_C KEEL Classification Algorithm*

---

**Description**

PUBLIC\_C Classification Algorithm from KEEL.

**Usage**

```
PUBLIC_C(train, test, nodesBetweenPrune, estimateToPrune)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
nodesBetweenPrune	nodesBetweenPrune. Default value = 25
estimateToPrune	estimateToPrune. Default value = "PUBLIC(1)"

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::PUBLIC_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

PW\_C

*PW\_C KEEL Classification Algorithm*

---

### Description

PW\_C Classification Algorithm from KEEL.

### Usage

```
PW_C(train, test, beta, ro, epsilon)
```

### Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
beta	beta. Default value = 8.0
ro	ro. Default value = 0.001
epsilon	epsilon. Default value = 0.001

### Value

A data.frame with the actual and predicted classes for both train and test datasets.

### Examples

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::PW_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

QDA\_C

*QDA\_C KEEL Classification Algorithm*

---

**Description**

QDA\_C Classification Algorithm from KEEL.

**Usage**

```
QDA_C(train, test, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::QDA_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

RBFN\_C

*RBFN\_C KEEL Classification Algorithm*

---

**Description**

RBFN\_C Classification Algorithm from KEEL.

**Usage**

```
RBFN_C(train, test, neurons, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
neurons	neurons. Default value = 50
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::RBFN_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

RBFN\_R

*RBFN\_R KEEL Regression Algorithm*


---

**Description**

RBFN\_R Regression Algorithm from KEEL.

**Usage**

```
RBFN_R(train, test, neurons, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
neurons	neurons. Default value = 50
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted values for both train and test datasets.



**Examples**

```

data_train <- RKEEL::loadKeelDataset("autoMPG6_train")
data_test <- RKEEL::loadKeelDataset("autoMPG6_test")

#Create algorithm
algorithm <- RKEEL::RBFN_R(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions

```

---

read.keel	<i>Read keel dataset</i>
-----------	--------------------------

---

**Description**

Method for read datasets in .dat KEEL format

**Usage**

```
read.keel(file)
```

**Arguments**

file            File containing the dataset to be read. It must be in KEEL .dat format.

**Value**

Returns a data.frame object with the dataset

---

RegressionAlgorithm	<i>Regression Algorithm</i>
---------------------	-----------------------------

---

**Description**

Class inheriting of KeelAlgorithm, to common methods for all KEEL Regression Algorithms. The specific regression algorithms must inherit of this class.

---

RegressionResults	<i>Regression Results</i>
-------------------	---------------------------

---

**Description**

Class to calculate and store some results for a RegressionAlgorithm. It receives as parameter the prediction of a regression algorithm as a data.frame object.

---

Relief_FS	<i>Relief_FS KEEL Preprocess Algorithm</i>
-----------	--

---

**Description**

Relief\_FS Preprocess Algorithm from KEEL.

**Usage**

```
Relief_FS(train, test, paramKNN, relevanceThreshold,
          numInstancesSampled, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
paramKNN	paramKNN. Default value = 1
relevanceThreshold	relevanceThreshold. Default value = 0.20
numInstancesSampled	numInstancesSampled. Default value = 1000
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::Relief_FS(data_train, data_test)

#Run algorithm
```

```
algorithm$run()

#See results
algorithm$preprocessed_test
```

---

Ripper\_C

*Ripper\_C KEEL Classification Algorithm*

---

### Description

Ripper\_C Classification Algorithm from KEEL.

### Usage

```
Ripper_C(train, test, grow_pct, k, seed)
```

### Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
grow_pct	grow_pct. Default value = 0.66
k	k. Default value = 2
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

### Value

A data.frame with the actual and predicted classes for both train and test datasets.

### Examples

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::Ripper_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

RISE_C	<i>RISE_C KEEL Classification Algorithm</i>
--------	---

---

**Description**

RISE\_C Classification Algorithm from KEEL.

**Usage**

```
RISE_C(train, test, Q, S)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
Q	Q. Default value = 1
S	S. Default value = 2

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::RISE_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

runParallel	<i>Run Parallel</i>
-------------	---------------------

---

**Description**

Run a set of RKEEL algorithms in parallel

**Usage**

```
runParallel(algorithmList, cores)
```

**Arguments**

algorithmList List of RKEEL Algorithms to be executed

cores Number of cores to execute in parallel. If it is not specified, it detects the cores automatically and execute the experiment in all of them

**Value**

Returns a list with the executed algorithms

**Examples**

```
#Load datasets
iris_train <- RKEEL::loadKeelDataset("iris_train")
iris_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithms
learner_C45_C <- RKEEL::C45_C(iris_train, iris_test)
learner_FRNN_C <- RKEEL::FRNN_C(iris_train, iris_test)
learner_FuzzyKNN_C <- RKEEL::FuzzyKNN_C(iris_train, iris_test)
learner_KNN_C <- RKEEL::KNN_C(iris_train, iris_test)
learner_Logistic_C <- RKEEL::Logistic_C(iris_train, iris_test)
learner_LDA_C <- RKEEL::LDA_C(iris_train, iris_test)

#Create list
algorithms <- list(learner_C45_C, learner_FRNN_C, learner_FuzzyKNN_C,
  learner_KNN_C, learner_Logistic_C, learner_LDA_C)

#Run algorithms in parallel in two cores
par <- RKEEL::runParallel(algorithms, 2)
```

---

runSequential

*Run Sequential*


---

**Description**

Run a set of RKEEL algorithms in sequential.

**Usage**

```
runSequential(algorithmList)
```

**Arguments**

algorithmList List of RKEEL Algorithms to be executed

**Value**

Returns a list with the executed algorithms

## Examples

```
#Load datasets
iris_train <- RKEEL::loadKeelDataset("iris_train")
iris_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithms
learner_C45_C <- RKEEL::C45_C(iris_train, iris_test)
learner_FRNN_C <- RKEEL::FRNN_C(iris_train, iris_test)
learner_FuzzyKNN_C <- RKEEL::FuzzyKNN_C(iris_train, iris_test)
learner_KNN_C <- RKEEL::KNN_C(iris_train, iris_test)
learner_Logistic_C <- RKEEL::Logistic_C(iris_train, iris_test)
learner_LDA_C <- RKEEL::LDA_C(iris_train, iris_test)

#Create list
algorithms <- list(learner_C45_C, learner_FRNN_C, learner_FuzzyKNN_C,
  learner_KNN_C, learner_Logistic_C, learner_LDA_C)

#Run algorithms
par <- RKEEL::runSequential(algorithms)
```

---

SaturationFilter\_F      *SaturationFilter\_F KEEL Preprocess Algorithm*

---

## Description

SaturationFilter\_F Preprocess Algorithm from KEEL.

## Usage

```
SaturationFilter_F(train, test, seed)
```

## Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

## Value

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```

data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::SaturationFilter_F(data_train, data_test)

#Run algorithm
#algorithm$run()

#See results
#algorithm$preprocessed_test

```

SFS\_IEP\_FS

*SFS\_IEP\_FS KEEL Preprocess Algorithm***Description**

SFS\_IEP\_FS Preprocess Algorithm from KEEL.

**Usage**

```
SFS_IEP_FS(train, test, threshold, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
threshold	threshold. Default value = 0.005
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```

data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::SFS_IEP_FS(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$preprocessed_test

```

SGA\_C

*SGA\_C KEEL Classification Algorithm***Description**

SGA\_C Classification Algorithm from KEEL.

**Usage**

```
SGA_C(train, test, mut_prob_1to0, mut_prob_0to1, cross_prob,
      pop_size, evaluations, alfa, selection_type, k,
      distance, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
mut_prob_1to0	mut_prob_1to0. Default value = 0.01
mut_prob_0to1	mut_prob_0to1. Default value = 0.001
cross_prob	cross_prob. Default value = 1
pop_size	pop_size. Default value = 50
evaluations	evaluations. Default value = 10000
alfa	alfa. Default value = 0.5
selection_type	selection_type. Default value = "orden_based"
k	k. Default value = 1
distance	distance. Default value = "Euclidean"
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::SGA_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```



---

Shrink_C	<i>Shrink_C KEEL Classification Algorithm</i>
----------	---

---

**Description**

Shrink\_C Classification Algorithm from KEEL.

**Usage**

```
Shrink_C(train, test, k, distance)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
k	k. Default value = 1
distance	distance. Default value = "Euclidean"

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::Shrink_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

Slipper_C	<i>Slipper_C KEEL Classification Algorithm</i>
-----------	--

---

**Description**

Slipper\_C Classification Algorithm from KEEL.

**Usage**

```
Slipper_C(train, test, grow_pct, numBoosting, seed)
```

**Arguments**

<code>train</code>	Train dataset as a data.frame object
<code>test</code>	Test dataset as a data.frame object
<code>grow_pct</code>	grow_pct. Default value = 0.66
<code>numBoosting</code>	numBoosting. Default value = 100
<code>seed</code>	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::Slipper_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

SMO\_C

*SMO\_C KEEL Classification Algorithm*


---

**Description**

SMO\_C Classification Algorithm from KEEL.

**Usage**

```
SMO_C(train, test, C, toleranceParameter, epsilon,
      RBFKernel_gamma, normalized_PolyKernel_exponent,
      normalized_PolyKernel_useLowerOrder, PukKernel_omega,
      PukKernel_sigma, StringKernel_lambda,
      StringKernel_subsequenceLength,
      StringKernel_maxSubsequenceLength, StringKernel_normalize,
      StringKernel_pruning, KernelType, FitLogisticModels,
      ConvertNominalAttributesToBinary, PreprocessType, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
C	C. Default value = 1.0
toleranceParameter	toleranceParameter. Default value = 0.001
epsilon	epsilon. Default value = 1.0e-12
RBFKernel_gamma	RBFKernel_gamma. Default value = 0.01
normalized_PolyKernel_exponent	normalized_PolyKernel_exponent. Default value = 1
normalized_PolyKernel_useLowerOrder	normalized_PolyKernel_useLowerOrder. Default value = FALSE
PukKernel_omega	PukKernel_omega. Default value = 1.0
PukKernel_sigma	PukKernel_sigma. Default value = 1.0
StringKernel_lambda	StringKernel_lambda. Default value = 0.5
StringKernel_subsequenceLength	StringKernel_subsequenceLength. Default value = 3
StringKernel_maxSubsequenceLength	StringKernel_maxSubsequenceLength. Default value = 9
StringKernel_normalize	StringKernel_normalize. Default value = FALSE
StringKernel_pruning	StringKernel_pruning. Default value = "None"
KernelType	KernelType. Default value = "PolyKernel"
FitLogisticModels	FitLogisticModels. Default value = FALSE
ConvertNominalAttributesToBinary	ConvertNominalAttributesToBinary. Default value = TRUE
PreprocessType	PreprocessType. Default value = "Normalize"
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

### Examples

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::SMO_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

SSGA\_Integer\_knn\_FS    *SSGA\_Integer\_knn\_FS KEEL Preprocess Algorithm*

---

### Description

SSGA\_Integer\_knn\_FS Preprocess Algorithm from KEEL.

### Usage

```
SSGA_Integer_knn_FS(train, test, paramKNN, nEval, pop_size,
  numFeatures, seed)
```

### Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
paramKNN	paramKNN. Default value = 1
nEval	nEval. Default value = 5000
pop_size	pop_size. Default value = 100
numFeatures	numFeatures. Default value = 3
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

### Value

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```

data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
#algorithm <- RKEEL::SSGA_Integer_knn_FS(data_train, data_test)
algorithm <- RKEEL::SSGA_Integer_knn_FS(data_train, data_test, nEval = 10, pop_size = 10)

#Run algorithm
algorithm$run()

#See results
algorithm$preprocessed_test

```

---

Tan\_GP\_C

*Tan\_GP\_C KEEL Classification Algorithm*


---

**Description**

Tan\_GP\_C Classification Algorithm from KEEL.

**Usage**

```

Tan_GP_C(train, test, population_size, max_generations,
          max_deriv_size, rec_prob, mut_prob, copy_prob, w1, w2,
          elitist_prob, support, seed)

```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
population_size	population_size. Default value = 150
max_generations	max_generations. Default value = 100
max_deriv_size	max_deriv_size. Default value = 20
rec_prob	rec_prob. Default value = 0.8
mut_prob	mut_prob. Default value = 0.1
copy_prob	copy_prob. Default value = 0.01
w1	w1. Default value = 0.7
w2	w2. Default value = 0.8
elitist_prob	elitist_prob. Default value = 0.06
support	support. Default value = 0.03
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
#algorithm <- RKEEL::Tan_GP_C(data_train, data_test)
algorithm <- RKEEL::Tan_GP_C(data_train, data_test, population_size = 5, max_generations = 10)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

 Thrift\_R

*Thrift\_R KEEL Regression Algorithm*


---

**Description**

Thrift\_R Regression Algorithm from KEEL.

**Usage**

```
Thrift_R(train, test, numLabels, popSize, evaluations,
         crossProb, mutProb, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
numLabels	numLabels. Default value = 3
popSize	popSize. Default value = 61
evaluations	evaluations. Default value = 10000
crossProb	crossProb. Default value = 0.6
mutProb	mutProb. Default value = 0.1
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the actual and predicted values for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("autoMPG6_train")
data_test <- RKEEL::loadKeelDataset("autoMPG6_test")

#Create algorithm
#algorithm <- RKEEL::Thrift_R(data_train, data_test)
algorithm <- RKEEL::Thrift_R(data_train, data_test, popSize = 5, evaluations = 10)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

UniformFrequency\_D      *UniformFrequency\_D KEEL Preprocess Algorithm*

---

**Description**

UniformFrequency\_D Preprocess Algorithm from KEEL.

**Usage**

```
UniformFrequency_D(train, test, numIntervals, seed)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
numIntervals	numIntervals. Default value = 10
seed	Seed for random numbers. If it is not assigned a value, the seed will be a random number

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::UniformFrequency_D(data_train, data_test)

#Run algorithm
algorithm$run()
```

```
#See results
algorithm$preprocessed_test
```

---

UniformWidth\_D

*UniformWidth\_D KEEL Preprocess Algorithm*

---

### Description

UniformWidth\_D Preprocess Algorithm from KEEL.

### Usage

```
UniformWidth_D(train, test, numIntervals)
```

### Arguments

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
numIntervals	numIntervals. Default value = 10

### Value

A data.frame with the preprocessed data for both train and test datasets.

### Examples

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::UniformWidth_D(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$preprocessed_test
```



---

`VWFuzzyKNN_C`*VWFuzzyKNN\_C KEEL Classification Algorithm*

---

**Description**

VWFuzzyKNN\_C Classification Algorithm from KEEL.

**Usage**

```
VWFuzzyKNN_C(train, test, k, init_k)
```

**Arguments**

<code>train</code>	Train dataset as a data.frame object
<code>test</code>	Test dataset as a data.frame object
<code>k</code>	k. Default value = 3
<code>init_k</code>	init_k. Default value = 3

**Value**

A data.frame with the actual and predicted classes for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("iris_train")
data_test <- RKEEL::loadKeelDataset("iris_test")

#Create algorithm
algorithm <- RKEEL::VWFuzzyKNN_C(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

`WM_R`*WM\_R KEEL Regression Algorithm*

---

**Description**

WM\_R Regression Algorithm from KEEL.

**Usage**

```
WM_R(train, test, numlabels, KB)
```

**Arguments**

train	Train dataset as a data.frame object
test	Test dataset as a data.frame object
numlabels	numlabels. Default value = 5
KB	KB. Default value = FALSE

**Value**

A data.frame with the actual and predicted values for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("autoMPG6_train")
data_test <- RKEEL::loadKeelDataset("autoMPG6_test")

#Create algorithm
algorithm <- RKEEL::WM_R(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$testPredictions
```

---

writeDatFromDataframe *Write .dat from data.frame*

---

**Description**

Method for writing a .dat dataset file in KEEL format given a data.frame dataset

**Usage**

```
writeDatFromDataframe(data, fileName)
```

**Arguments**

data	data.frame dataset
fileName	String with the file name to store the dataset

**Examples**

```
data(iris)
writeDatFromDataframe(iris, "iris.dat")
```

---

`writeDatFromDataframes`*Write .dat from data.frames*

---

**Description**

Method for writing both train and test .dat dataset files in KEEL format.

**Usage**

```
writeDatFromDataframes(trainData, testData,  
                        trainFileName, testFileName)
```

**Arguments**

<code>trainData</code>	Train data as data.frame object
<code>testData</code>	Test data as data.frame object
<code>trainFileName</code>	String with the file name to store the train dataset
<code>testFileName</code>	String with the file name to store the test dataset

---

`ZScore_TR`*ZScore\_TR KEEL Preprocess Algorithm*

---

**Description**

ZScore\_TR Preprocess Algorithm from KEEL.

**Usage**

```
ZScore_TR(train, test)
```

**Arguments**

<code>train</code>	Train dataset as a data.frame object
<code>test</code>	Test dataset as a data.frame object

**Value**

A data.frame with the preprocessed data for both train and test datasets.

**Examples**

```
data_train <- RKEEL::loadKeelDataset("car_train")
data_test <- RKEEL::loadKeelDataset("car_test")

#Create algorithm
algorithm <- RKEEL::ZScore_TR(data_train, data_test)

#Run algorithm
algorithm$run()

#See results
algorithm$preprocessed_test
```

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