Package 'predictoR'

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Type Package

Title Predictive Data Analysis System

Version 4.1.1

Description Perform a supervised data analysis on a database through a 'shiny' graphical interface. It includes methods such as K-Nearest Neighbors, Decision Trees, ADA Boosting, Extreme Gradient Boosting, Random Forest, Neural Networks, Deep Learning, Support Vector Machines and Bayesian Methods.

License GPL (>= 2)

Imports DT (>= 0.27), dplyr (>= 1.1.0), shiny (>= 1.7.4), golem (>= 0.3.5), rlang (>= 1.0.6), loadeR (>= 1.0.1), config (>= 0.3.1), glmnet (>= 4.1-6), traineR (>= 2.0.4), shinyjs (>= 2.1.0), xgboost (>= 1.7.3.1), shinyAce (>= 0.4.2), echarts4r (>= 0.4.4), htmltools (>= 0.5.4), rpart.plot (>= 3.1.1), colourpicker (>= 1.1.1), shinydashboard (>= 0.7.2), shinycustomloader (>= 0.9.0), shinydashboardPlus (>= 2.0.3)

Depends R (>= 4.1)

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BugReports https://github.com/PROMiDAT/predictoR/issues

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Contents

`contr.dummy` *Returns a matrix of contrasts for the train.kknn.*

Description

Returns a matrix of contrasts for the train.kknn.

Usage

```
contr.dummy(n, contrasts = TRUE)
```

Arguments

`n`	A vector containing levels of a factor, or the number of levels.
`contrasts`	A logical value indicating whether contrasts should be computed.

Author(s)

Joseline Quiros <joseline.quiros@promidat.com>

Examples

```
contr.dummy(5)
```

contr.metric *Returns a matrix of contrasts for the train.kknn.*

Description

Returns a matrix of contrasts for the train.kknn.

Usage

```
contr.metric(n, contrasts = TRUE)
```

Arguments

n	A vector containing levels of a factor, or the number of levels.
contrasts	A logical value indicating whether contrasts should be computed.

Author(s)

Joseline Quiros <joseline.quiros@promidat.com>

Examples

```
contr.metric(5)
```

contr.ordinal *Returns a matrix of contrasts for the train.kknn.*

Description

Returns a matrix of contrasts for the train.kknn.

Usage

```
contr.ordinal(n, contrasts = TRUE)
```

Arguments

n	A vector containing levels of a factor, or the number of levels.
contrasts	A logical value indicating whether contrasts should be computed.

Author(s)

Joseline Quiros <joseline.quiros@promidat.com>

Examples

```
contr.ordinal(5)
```

`data.frame.dummy` *Convierte toda la tabla a código dummy.*

Description

Convierte toda la tabla a código dummy.

Usage

```
data.frame.dummy(DF, exclude = NULL)
```

Arguments

`DF`	a data.frame.
`exclude`	variables of data.frame exclude of conversion.

Author(s)

Diego Jimenez <diego.jimenezs@promidat.com>

Examples

```
data.frame.dummy(iris)
```

`e_ada_evol_error` *Error Evolution*

Description

Error Evolution

Usage

```
e_ada_evol_error(modelo, datos, label = "Iterations")
```

Arguments

`modelo`	a adabag model.
`datos`	a data.frame object.
`label`	a label plot.

Value

echarts4r plot

Author(s)

Joseline Quiros <joseline.quiros@promidat.com>

Examples

```
model <- traineR::train.adabag(Species~., iris, mfinal = 20, coeflearn = 'Freund')
e_ada_evol_error(model, iris)
```

---

e_boost_importance *Var importance Random Forest*

Description

Var importance Random Forest

Usage

```
e_boost_importance(modelo)
```

Arguments

modelo	a adabag model.

Value

echarts4r plot

Author(s)

Joseline Quiros <joseline.quiros@promidat.com>

Examples

```
model <- traineR::train.adabag(Species~., iris, mfinal = 20, coeflearn = 'Freund')
e_boost_importance(model)
```

e_coeff_lambda *Coefficients and lambda*

Description

Plot the coefficients and selected lambda of a glmnet model.

Usage

```
e_coeff_lambda(model, cat, sel.lambda = NULL, label = "Log Lambda")
```

Arguments

model	a glmnet model.
cat	a category of the variable to be predicted.
sel.lambda	the selected lambda.
label	a character specifying the title to use on selected lambda tooltip.

Value

echarts4r plot

Author(s)

Joseline Quiros <joseline.quiros@promidat.com>

Examples

```
x <- model.matrix(Species ~ ., iris)[, -1]
y <- iris$Species
modelo <- glmnet::cv.glmnet(x, y, standardize = TRUE, alpha = 1, family = "multinomial")
e_coeff_lambda(modelo, 'setosa', log(modelo$lambda[1]))
```

e_global_gauge *Gauge Plot*

Description

Gauge Plot

Usage

```
e_global_gauge(
  value = 100,
  label = "Label",
  color1 = "#B5E391",
  color2 = "#90C468"
)
```

Arguments

value	a number specifying the value of the graph.
label	a character specifying the title to use on legend.
color1	a color for the gauge.
color2	a shadowColor for the gauge.

Value

echarts4r plot

Author(s)

Joseline Quiros <joseline.quiros@promidat.com>

Examples

```
e_global_gauge(87, "Global Precision")
```

---

e_JS *Eval character vectors to JS code*

Description

Eval character vectors to JS code

Usage

```
e_JS(...)
```

Arguments

...	character vectors to evaluate

Author(s)

Joseline Quiros <joseline.quiros@promidat.com>

Examples

```
e_JS('5 * 3')
```

`e_posib_lambda` *Possible lambda*

Description

Possible lambda

Usage

```
e_posib_lambda(
  cv.glm,
  labels = c("Valor Superior", "Valor Inferior", "lambda")
)
```

Arguments

`cv.glm`	a cv.glmnet model.
`labels`	a character vector of length 3 specifying the titles to use on legend.

Value

echarts4r plot

Author(s)

Joseline Quiros <joseline.quiros@promidat.com>

Examples

```
x         <- model.matrix(Species~., iris)[, -1]
y         <- iris[,'Species']
cv.glm   <- glmnet::cv.glmnet(x, y, standardize = TRUE, alpha = 1, family = 'multinomial')
e_posib_lambda(cv.glm)
```

e_rf_error *Error Evolution*

Description

Error Evolution

Usage

```
e_rf_error(model, label = "Trees")
```

Arguments

model	a random forest model.
label	a label plot.

Value

echarts4r plot

Author(s)

Joseline Quiros <joseline.quiros@promidat.com>

Examples

```
model <- traineR::train.randomForest(Species~., iris, mtry = 2, ntree = 20)
label <- "Trees"
e_rf_error(model, label)
```

e_rndf_importance *Var importance Random Forest*

Description

Var importance Random Forest

Usage

```
e_rndf_importance(modelo, error = "MeanDecreaseAccuracy")
```

Arguments

modelo	a random forest model.
error	a character specifying the type of importance.

Value

echarts4r plot

Author(s)

Joseline Quiros <joseline.quiros@promidat.com>

Examples

```
model <- traineR::train.randomForest(Species~., iris, mtry = 2, ntree = 20)
e_rndf_importance(model)
```

`e_xgb_importance` *Var importance XGBoosting*

Description

Var importance XGBoosting

Usage

```
e_xgb_importance(modelo, error = "Gain")
```

Arguments

`modelo`	a random forest model.
`error`	a character specifying the type of importance.

Value

echarts4r plot

Author(s)

Joseline Quiros <joseline.quiros@promidat.com>

Examples

```
model <- traineR::train.xgboost(Species ~ ., data = iris, nrounds = 20)
e_xgb_importance(model)
```

predictoR *Predictive Data Analysis System*

Description

Perform a supervised data analysis on a database through a 'shiny' graphical interface. It includes methods such as K-Nearest Neighbors, Decision Trees, ADA Boosting, Extreme Gradient Boosting, Random Forest, Neural Networks, Deep Learning, Support Vector Machines and Bayesian Methods.

Details

Package:	predictoR
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Author(s)

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See Also

Useful links:

- https://promidat.website/
- Report bugs at https://github.com/PROMiDAT/predictoR/issues

run_app *Run the Shiny Application*

Description

Run the Shiny Application

Usage

```
run_app(...)
```

Arguments

...	A series of options to be used inside the app.

`voronoi_svm_plot` *Voronoi Plot SVM*

Description

Voronoi Plot SVM

Usage

```
voronoi_svm_plot(datos, varpred, vars, kernel = "linear")
```

Arguments

`datos`	a data.frame object.
`varpred`	variable to predict.
`vars`	predictor variables.
`kernel`	the kernel used in training and predicting.

Value

plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
voronoi_svm_plot(iris, "Species", c("Sepal.Length", "Sepal.Width"), "linear")
```

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