Package 'radarBoxplot'

October 14, 2022

Title Implementation of the Radar-Boxplot

Version 1.0.5

Description Creates the radar-boxplot, a plot that was created by the
author during his Ph.D. in forest resources.
The radar-boxplot is a visualization feature suited for
multivariate classification/clustering. It provides an intuitive
deep understanding of the data.

Suggests ggplot2

Depends R (>= 3.5)

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Encoding UTF-8

LazyData true

RoxygenNote 7.1.2

URL https://github.com/caiohamamura/radarBoxplot-R,
https://radarboxplot.r-forge.r-project.org/

BugReports https://github.com/caiohamamura/radarBoxplot-R/issues

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R topics documented:

| radarBoxplot | *Function to plot the radar-boxplot* |

Description

Function to plot the radar-boxplot

Usage

```
radarBoxplot(x, ...)

## S3 method for class 'formula'
radarBoxplot(x, data, ...)

## Default S3 method:
radarBoxplot(
  x,
  y,
  IQR = 1.5,
  use.ggplot2 = FALSE,
  mfrow = NA,
  oma = c(5, 4, 0, 0) + 0.1,
  mar = c(0, 0, 1, 1) + 0.1,
  innerPolygon = list(),
  outerPolygon = list(),
  innerBorder = list(),
  outerBorder = list(),
  medianLine = list(),
  outlierPoints = list(),
  nTicks = 4,
  ticksArgs = list(),
  axisArgs = list(),
  labelsArgs = list(),
  angleOffset = NA,
  ...
)
```

Arguments

x	a data frame or matrix of attributes or a formula describing the attributes for the class
...	parameter to allow the usage of S3 methods
data	dataset for fomula variant for which formula was defined
y	a response vector

`IQR`	numeric. The factor to multiply the IQR to define the outlier threshold. Default 1.5
`use.ggplot2`	if ggplot2 are available it will use ggplot for plotting: Default FALSE
`mfrow`	mfrow argument for defining the subplots nrows and ncols: Default will calculate the minimum square
`oma`	outer margins of the subplots: Default c(5,4,0,0) + 0.1
`mar`	margins of the subplots: Default c(0,0,1,1) + 0.1
`innerPolygon`	a list of optional arguments to override Q2-Q3 'graphics::polygon()' style: Default list()
`outerPolygon`	a list of optional arguments to override the outer (range) 'graphics::polygon()' default style: Default list()
`innerBorder`	a list of optional arguments to override the inner border 'graphics::lines()' default style: Default list()
`outerBorder`	a list of optional arguments to override the outer border 'graphics::lines()' default style: Default list()
`medianLine`	a list of optional arguments to override the median line 'graphics::lines()' default style: Default list()
`outlierPoints`	a list of optional arguments to override the outliers 'graphics::points()' default style: Default list()
`nTicks`	number of ticks for the radar chart: Default 4
`ticksArgs`	a list of optional arguments to override radar ticks 'graphics::lines()' default style: Default list()
`axisArgs`	a list of optional arguments to override radar axis 'graphics::lines()' default style: Default list()
`labelsArgs`	a list of optional arguments to override labels 'graphics::text()' default style: Default list()
`angleOffset`	offset for rotating the plots: Default will let the top free of axis to avoid its label overlapping the title

Examples

```
library(radarBoxplot)
data("winequality_red")

# Regular
radarBoxplot(quality ~ ., winequality_red)

# Orange and green pattern with grey median
radarBoxplot(quality ~ ., winequality_red,
             use.ggplot2=FALSE, medianLine=list(col="grey"),
             innerPolygon=list(col="#FFA500CC"),
             outerPolygon=list(col=rgb(0,.7,0,0.6)))

# Plot in 2 rows and 3 columns
# change columns order (counter clockwise)
```

```
radarBoxplot(quality ~ volatile.acidity + citric.acid +
                residual.sugar + fixed.acidity + chlorides +
                free.sulfur.dioxide + total.sulfur.dioxide +
                density + pH + sulphates + alcohol,
                data = winequality_red,
                mfrow=c(2,3))
```

---

winequality_red   *Red Wine Quality Dataset*

Description

Related to red vinho verde wine samples, from the north of Portugal. The goal is to model wine
quality based on physicochemical tests

Usage

```
winequality_red
```

Format

A data frame with 1599 rows and 12 variables:

Source

<https://archive.ics.uci.edu/ml/datasets/wine+quality>

References

P. Cortez, A. Cerdeira, F. Almeida, T. Matos and J. Reis. Modeling wine preferences by data mining
from physicochemical properties. In Decision Support Systems, Elsevier, 47(4):547-553, 2009.

---

winequality_white   *White Wine Quality Dataset*

Description

Related to white vinho verde wine samples, from the north of Portugal. The goal is to model wine
quality based on physicochemical tests

Usage

```
winequality_white
```

Format

A data frame with 4898 rows and 12 variables:

Source

https://archive.ics.uci.edu/ml/datasets/wine+quality

References

P. Cortez, A. Cerdeira, F. Almeida, T. Matos and J. Reis. Modeling wine preferences by data mining from physicochemical properties. In Decision Support Systems, Elsevier, 47(4):547-553, 2009.

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