

Package: radarBoxplot (via r-universe)

October 31, 2024

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>

Repository <https://caiohamamura.r-universe.dev>

RemoteUrl <https://github.com/caiohamamura/radarBoxplot-R>

RemoteRef HEAD

RemoteSha f49414c5b48eb0bdf5d0d27dbb057aa86040c486

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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

<code>use.ggplot2</code>	if ggplot2 are available it will use ggplot for plotting: Default FALSE
<code>mfrow</code>	mfrow argument for defining the subplots nrows and ncols: Default will calculate the minimum square
<code>oma</code>	outer margins of the subplots: Default $c(5,4,0,0) + 0.1$
<code>mar</code>	margins of the subplots: Default $c(0,0,1,1) + 0.1$
<code>innerPolygon</code>	a list of optional arguments to override Q2-Q3 'graphics::polygon()' style: Default list()
<code>outerPolygon</code>	a list of optional arguments to override the outer (range) 'graphics::polygon()' default style: Default list()
<code>innerBorder</code>	a list of optional arguments to override the inner border 'graphics::lines()' default style: Default list()
<code>outerBorder</code>	a list of optional arguments to override the outer border 'graphics::lines()' default style: Default list()
<code>medianLine</code>	a list of optional arguments to override the median line 'graphics::lines()' default style: Default list()
<code>outlierPoints</code>	a list of optional arguments to override the outliers 'graphics::points()' default style: Default list()
<code>nTicks</code>	number of ticks for the radar chart: Default 4
<code>ticksArgs</code>	a list of optional arguments to override radar ticks 'graphics::lines()' default style: Default list()
<code>axisArgs</code>	a list of optional arguments to override radar axis 'graphics::lines()' default style: Default list()
<code>labelsArgs</code>	a list of optional arguments to override labels 'graphics::text()' default style: Default list()
<code>angleOffset</code>	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	<i>Red Wine Quality Dataset</i>
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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	<i>White Wine Quality Dataset</i>
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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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