

Package ‘SPOUSE’

July 21, 2025

Type Package

Title Scatter Plots Over-Viewed Using Summary Ellipses

Version 0.1.0

Maintainer Siddhanta Phuyal <siddhantaphuyal7159@gmail.com>

Description Summary ellipses superimposed on a scatter plot contain all bi-variate summary statistics for regression analysis. Furthermore, the outer ellipse flags potential outliers. Multiple groups can be compared in terms of centers and spreads as illustrated in the examples.

License GPL-3

Encoding UTF-8

RoxygenNote 7.1.2

NeedsCompilation no

Author Siddhanta Phuyal [aut, cre],
Mamunur Rashid [aut],
Jyotirmoy Sarkar [aut]

Repository CRAN

Date/Publication 2022-04-29 08:10:02 UTC

Contents

summaryEllipse 1

Index 4

summaryEllipse	<i>SPOUSE (Scatter Plots Over-Viewed Using Summary Ellipses)</i>
----------------	--

Description

Summary ellipses superimposed on a scatter plot contain all bi-variate summary statistics for regression analysis. Furthermore, the outer ellipse flags potential outliers. Multiple groups can be compared in terms of centers and spreads as illustrated in the examples.

Usage

```
summaryEllipse(
  data1,
  data2,
  InEllipse = TRUE,
  OutEllipse = TRUE,
  InRect = TRUE,
  OutRect = TRUE,
  xlab = "X",
  ylab = "Y",
  main = "Summary Ellipse",
  coverage = 0.98,
  add = FALSE,
  wspace = 0.2,
  REGyonx = TRUE,
  REGxony = TRUE,
  ylim = c(min(data2) - wspace * (max(data2) - min(data2)), max(data2) + wspace *
    (max(data2) - min(data2))),
  xlim = c(min(data1) - wspace * (max(data1) - min(data1)), max(data1) + wspace *
    (max(data1) - min(data1))),
  pch = 1,
  cex = 0.7,
  col = "black"
)
```

Arguments

data1	explanatory variable; numeric vector x
data2	response variable; numeric vector y
InEllipse	LOGICAL; True (Default) for showing the inner ellipse
OutEllipse	LOGICAL; TRUE (Default) for showing the outer ellipse
InRect	LOGICAL; TRUE (Default) for showing the inner rectangle
OutRect	LOGICAL; TRUE (Default) for showing the outer rectangle
xlab	x-variable label
ylab	y-variable label
main	Main title of the plot.
coverage	the percentage of data that falls inside the outer ellipse
add	adds a summary ellipse of a new data set to an existing plot. Compares multiple groups.
wspace	the amount of white space around the plot window; negative to suppress details around the boundaries (zoom in); positive to zoom out. Default is 0.2.
REGyonx	LOGICAL; TRUE (Default) for showing the regression line of y on x.
REGxony	LOGICAL; TRUE (Default) for showing the regression line of x on y.
ylim	bounds for the y-axis

xlim	bounds for the x-axis
pch	display symbols for the points in the scatter plot; Use different pch for different groups.
cex	size of the points
col	color of the points

Value

A new plot which shows the ellipses superimposed on top of each other.

Examples

```
x1<-iris3[, "Sepal L.", "Setosa"]
y1<-iris3[, "Sepal W.", "Setosa"]
x2<-iris3[, "Sepal L.", "Versicolor"]
y2<-iris3[, "Sepal W.", "Versicolor"]
x3<-iris3[, "Sepal L.", "Virginica"]
y3<-iris3[, "Sepal W.", "Virginica"]
xlim=c(4,8)
ylim=c(1.5,5)
summaryEllipse(x1,y1,xlim=xlim,ylim=ylim,InEllipse='F',InRect='F',
OutRect='F',REGxony='F',REGyonx='F')
summaryEllipse(x2,y2,add=TRUE,pch=20,col="brown",InEllipse='F',InRect='F',
OutRect='F',REGxony='F',REGyonx='F')
summaryEllipse(x3,y3,add=TRUE,pch=19,col="grey",InEllipse='F',InRect='F',
OutRect='F',REGxony='F',REGyonx='F')
#end of example
```

Index

summaryEllipse, 1