Package ‘BiplotGUI’

February 19, 2015

Type Package
Title Interactive Biplots in R
Version 0.0-7
Date 2013-03-18
Author Anthony la Grange, with some Fortran code adapted by NJ le Roux from the original by PJ Rousseeuw, I Ruts and JW Tukey
Maintainer Niel le Roux <nj1r@sun.ac.za>
Depends R (>= 2.15.2), colorspace (>= 1.2-1), deldir, rgl (>= 0.93), tcltk, tcltk2 (>= 1.2-5), tkrplot (>= 0.0-23)
Imports colorspace, KernSmooth, MASS
Description Provides a GUI with which users can construct and interact with biplots.
License GPL (>= 3)
LazyLoad yes
OS_type windows
SystemRequirements windows
URL http://biplotgui.r-forge.r-project.org/
NeedsCompilation yes
Repository CRAN
Date/Publication 2013-03-19 11:56:38

R topics documented:

BiplotGUI-package ........................................... 2
AntiqueFurniture ............................................ 2
Biplots ......................................................... 4
Countries ....................................................... 5
FighterAircraft ............................................... 6

Index 8
BiplotGUI-package  

BiplotGUI: Interactive Biplots in R

Description
A GUI with which to construct and interact with biplots.

Details
Package: BiplotGUI
Type: Package
Version: 0.0-7
Date: 2013-03-11
License: GPL-3 or later
LazyLoad: yes

The Biplots() function initialises the GUI.
At present, BiplotGUI is intended to be run under Windows. In Windows, it runs marginally better in SDI mode, rather than MDI mode.

Author(s)
Anthony la Grange
Maintainer: Niel le Roux <njlr@sun.ac.za> Includes Fortran code adapted by NJ le Roux from the original by PJ Rousseeuw, I Ruts and JW Tukey.

References

AntiqueFurniture  

Antique furniture data set

Description
Microscopic measurements made on Old-Cape antique furniture. The furniture are made from three types of wood.

Usage

data(AntiqueFurniture)
AntiqueFurniture

Format

A data frame with 37 observations on the following 7 variables.

Species  The tree species. A factor with levels obul, oken, por.
VesL  Vessel element length in micrometres. A numeric vector.
FibL  Fibre length in micrometres. A numeric vector.
RayH  Ray height in micrometres. A numeric vector.
RayW  Ray width in micrometres. A numeric vector.
NumVes  The number of vessels per millimetre squared. A numeric vector.

Details

During the period 1652–1900, wood from both the indiginous Ocotea bullata ("Stinkwood") and the imported Ocotea perosa ("Imbuia") were used to make Old-Cape furniture in South Africa. The data set contains mean measurements made on such wood, together with a third species, Ocotea kenyensis. Twenty samples of Ocotea bullata (obul), 10 samples of Ocotea perosa (opor) and 7 samples of Ocotea kenyensis (oken) were inspected microscopically, with six variables measured on each sample 50 times over. The data are the mean measurements over the 50 repetitions.

Source


References


Examples

```R
## Not run: Biplots(Data = AntiqueFurniture[, -1],
groups = AntiqueFurniture[, 1])
## End(Not run)
```
### Description

Initialises a GUI with which to construct and interact with biplots.

### Usage

```r
Biplots(Data, groups = rep(1, nrow(Data)),
    PointLabels = rownames(Data),
    AxisLabels = colnames(Data), excel = NULL,
    ExcelGroupsCol = NA)
```

### Arguments

- **Data**: A matrix or data frame of numerical data. Its $n$ samples (observations) will be represented as points in the biplots; its $p$ variables will be represented as calibrated biplot axes.
- **groups**: A vector or factor of length $n$ specifying the group membership of the samples. By default, all samples are taken to be from a single group. The group labels are taken from this argument, deprecated to 14 characters each.
- **PointLabels**: A vector of length $n$ specifying the point labels. By default, the point labels are taken to be the row names of `Data`.
- **AxisLabels**: A vector of length $p$ specifying the axis labels. By default, the axis labels are taken to be the column names of `Data`, deprecated to 14 characters each.
- **excel**: Deprecated as from version 0.0-4.1.
- **ExcelGroupsCol**: Deprecated as from version 0.0-4.1.

### Details

`Biplots()` is the sole function of the `BiplotGUI` package. The function initialises the GUI for a particular data set. All further options are available from within the GUI. The GUI features themselves are documented in a separate manual available from the Help menu of the GUI. The manual is also included as a vignette to the package.

Due to the removal of the `xlsReadWrite` package from CRAN, the direct import of data from Excel 1997-2003 files has been deprecated as from `BiplotGUI` 0.0-4.1. As an alternative mechanism, consider the `RODBC` package.

At present, `BiplotGUI` is intended to be run under Windows. In Windows, it runs marginally better in SDI mode, rather than MDI mode.

### Author(s)

Author: Anthony la Grange.

Maintainer: Niel le Roux <njlr@sun.ac.za>, [http://biplotgui.r-forge.r-project.org/](http://biplotgui.r-forge.r-project.org/)
Countries data set

Description
Eight variables measured on the countries with the 15 largest economies by purchasing price parity (PPP) gross domestic product (GDP) in 2007.

Usage
data(Countries)

Format
A data frame with 15 observations on the following 8 variables.

HIV.Aids HIV/Aids prevalence as a percentage of the population. A numeric vector.
Life.exp Life expectancy in years. A numeric vector.
Mil. Military spending as a percentage of GDP. A numeric vector.
Oil.cons Oil consumption in barrels per annum per capita. A numeric vector.
Tel. Number of fixed line telephones per 1000 people. A numeric vector.
Unempl. Percentage unemployed. A numeric vector.

Examples

```r
data(Countries)
## Not run: Biplots(Data = Countries)
data(AntiqueFurniture)
## Not run: Biplots(Data = AntiqueFurniture[, -1],
##                   groups = AntiqueFurniture[, 1])
## End(Not run)
data(FighterAircraft)
## Not run: Biplots(Data = FighterAircraft)
```

References

Details

The data have been derived largely from the 2007 CIA World Factbook, and are intended for illustrative purposes only.

Source


Examples

```r
## Not run: Biplots(data= Countries)
```

---

**FighterAircraft**  
*Fighter aircraft data set*

Description

Four variables measured on 21 types of US fighter aircraft.

Usage

```r
data(FighterAircraft)
```

Format

A data frame with 21 observations on the following 4 variables.

- **SPR** Specific power, proportional to power per unit weight. A numeric vector.
- **RGF** Flight range factor. A numeric vector.
- **PLF** Payload as a fraction of gross weight. A numeric vector.
- **SLF** Sustained load factor. A numeric vector.

Details


Source


References


Examples

## Not run: data(FighterAircraft)
Index

*Topic datasets
  AntiqueFurniture, 2
  Countries, 5
  FighterAircraft, 6

AntiqueFurniture, 2

BiplotGUI-package, 2
Biplots, 4

Countries, 5

FighterAircraft, 6