

Package ‘discover’

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Title Exploratory Data Analysis System

Version 3.1.7

Description Performs an exploratory data analysis through a 'shiny' interface. It includes basic methods such as the mean, median, mode, normality test, among others. It also includes clustering techniques such as Principal Components Analysis, Hierarchical Clustering and the K-Means Method.

License GPL (>= 2)

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Depends R (>= 4.4)

Encoding UTF-8

URL <https://promidat.website/>, <https://github.com/PROMiDAT/discover>

BugReports <https://github.com/PROMiDAT/discover/issues>

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BP *Calculate inter-class inertia*

Description

Calculate inter-class inertia

Usage

BP(DF, clusters)

Arguments

DF a data.frame object.
clusters a vector specifying the cluster of each individual.

Value

numeric

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
m <- hclust(dist(iris[, -5]))  
BP(iris[, -5], cutree(m, 3))
```

calc.centros

Calculation of the center of clusters

Description

Calculation of the center of clusters

Usage

```
calc.centros(data, clusters)
```

Arguments

data a data.frame object.
clusters a vector specifying the cluster of each individual.

Value

list

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
clusters <- factor(kmeans(iris[, -5], 3)$cluster)  
calc.centros(iris[, -5], clusters)
```

discoverR

Exploratory Data Analysis System

Description

Performs an exploratory data analysis through a 'shiny' interface. It includes basic methods such as the mean, median, mode, normality test, among others. It also includes clustering techniques such as Principal Components Analysis, Hierarchical Clustering and the K-Means Method.

Details

Package: discoverR
Type: Package
Version: 3.1.7
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Author(s)

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See Also

Useful links:

- <https://promidat.website/>
- <https://github.com/PROMiDAT/discoverR>
- Report bugs at <https://github.com/PROMiDAT/discoverR/issues>

e_afcbi

AFC biplot

Description

AFC biplot

Usage

```
e_afcbi(  
  modelo,  
  axes = c(1, 2),  
  colorRow = "steelblue",  
  colorCol = "forestgreen",  
  cos2Row = 0,  
  cos2Col = 0,  
  colorRowCos = "firebrick",  
  colorColCos = "darkorchid",  
  titulos = c("Bien Representados", "Mal Representados"),  
  etq = T  
)
```

Arguments

| | |
|-------------|--|
| modelo | an object of class CA [FactoMineR]. |
| axes | a numeric vector of length 2 specifying the dimensions to be plotted. |
| colorRow | a color for the individuals well represented. |
| colorCol | a color for the variables well represented. |
| cos2Row | a numeric value from 0 to 1 specifying the quality of the individuals. |
| cos2Col | a numeric value from 0 to 1 specifying the quality of the variables. |
| colorRowCos | a color for the individuals badly represented. |
| colorColCos | a color for the variables badly represented. |
| titulos | a character vector of length 2 specifying the titles to use on legend. |
| etq | a boolean, whether to add label to graph or not. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
p <- FactoMineR::CA(iris[, -5], graph = FALSE)
e_afcbi(p)
```

e_afcbi_3D

AFC biplot in 3D

Description

AFC biplot in 3D

Usage

```
e_afcbi_3D(
  modelo,
  axes = c(1, 2, 3),
  colorRow = "steelblue",
  colorCol = "forestgreen",
  cos2Row = 0,
  cos2Col = 0,
  colorRowCos = "firebrick",
  colorColCos = "darkorchid",
  titulos = c("Bien Representados", "Mal Representados"),
  etq = T
)
```

Arguments

| | |
|-------------|--|
| modelo | an object of class CA [FactoMineR]. |
| axes | a numeric vector of length 3 specifying the dimensions to be plotted. |
| colorRow | a color for the individuals well represented. |
| colorCol | a color for the variables well represented. |
| cos2Row | a numeric value from 0 to 1 specifying the quality of the individuals. |
| cos2Col | a numeric value from 0 to 1 specifying the quality of the variables. |
| colorRowCos | a color for individuals badly represented. |
| colorColCos | a color for variables badly represented. |
| titulos | a character vector of length 2 specifying the titles to use on legend. |
| etq | a boolean, whether to add label to graph or not. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
p <- FactoMineR::CA(iris[, -5], graph = FALSE)
e_afcbi_3D(p)
```

e_afccol

AFC plot of variables

Description

AFC plot of variables

Usage

```
e_afccol(
  modelo,
  axes = c(1, 2),
  colorCol = "forestgreen",
  cos2 = 0,
  colorCos = "darkorchid",
  titulos = c("Bien Representados", "Mal Representados")
)
```

Arguments

| | |
|----------|--|
| modelo | an object of class CA [FactoMineR]. |
| axes | a numeric vector of length 2 specifying the dimensions to be plotted. |
| colorCol | a color for the variables well represented. |
| cos2 | a numeric value from 0 to 1 specifying the quality of the variables. |
| colorCos | a color for the variables badly represented. |
| titulos | a character vector of length 2 specifying the titles to use on legend. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
p <- FactoMineR::CA(iris[, -5], graph = FALSE)
e_afccol(p)
```

e_afccol_3D

AFC plot of variables in 3D

Description

AFC plot of variables in 3D

Usage

```
e_afccol_3D(
  modelo,
  axes = c(1, 2, 3),
  colorCol = "forestgreen",
  cos2 = 0,
  colorCos = "darkorchid",
  titulos = c("Bien Representados", "Mal Representados")
)
```

Arguments

| | |
|----------|--|
| modelo | an object of class CA [FactoMineR]. |
| axes | a numeric vector of length 3 specifying the dimensions to be plotted. |
| colorCol | a color for the variables well represented. |
| cos2 | a numeric value from 0 to 1 specifying the quality of the variables. |
| colorCos | a color for variables badly represented. |
| titulos | a character vector of length 2 specifying the titles to use on legend. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
p <- FactoMineR::CA(iris[, -5], graph = FALSE)
e_afccol_3D(p)
```

e_afcmbi

AFCM biplot

Description

AFCM biplot

Usage

```
e_afcmbi(  
  modelo,  
  axes = c(1, 2),  
  colorInd = "steelblue",  
  colorVar = "forestgreen",  
  cos2Ind = 0,  
  cos2Var = 0,  
  colorIndCos = "firebrick",  
  colorVarCos = "darkorchid",  
  titulos = c("Bien Representados", "Mal Representados"),  
  etq = T  
)
```

Arguments

| | |
|-------------|--|
| modelo | an object of class AFCM [FactoMineR]. |
| axes | a numeric vector of length 2 specifying the dimensions to be plotted. |
| colorInd | a color for the individuals well represented. |
| colorVar | a color for the variables well represented. |
| cos2Ind | a numeric value from 0 to 1 specifying the quality of the individuals. |
| cos2Var | a numeric value from 0 to 1 specifying the quality of the variables. |
| colorIndCos | a color for the individuals badly represented. |
| colorVarCos | a color for the variables badly represented. |
| titulos | a character vector of length 2 specifying the titles to use on legend. |
| etq | a boolean, whether to add label to graph or not. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
data("poison", package = "FactoMineR")
poison.active <- poison[1:55, 5:15]
p <- FactoMineR::MCA(poison.active, graph = FALSE)
e_afcmbi(p)
```

e_afcmbi_3D

AFCM biplot in 3D

Description

AFCM biplot in 3D

Usage

```
e_afcmbi_3D(
  modelo,
  axes = c(1, 2, 3),
  colorInd = "steelblue",
  colorVar = "forestgreen",
  cos2Ind = 0,
  cos2Var = 0,
  colorIndCos = "firebrick",
  colorVarCos = "darkorchid",
  titulos = c("Bien Representados", "Mal Representados"),
  etq = T
)
```

Arguments

| | |
|-------------|--|
| modelo | an object of class AFCM [FactoMineR]. |
| axes | a numeric vector of length 3 specifying the dimensions to be plotted. |
| colorInd | a color for the individuals well represented. |
| colorVar | a color for the variables well represented. |
| cos2Ind | a numeric value from 0 to 1 specifying the quality of the individuals. |
| cos2Var | a numeric value from 0 to 1 specifying the quality of the variables. |
| colorIndCos | a color for individuals badly represented. |
| colorVarCos | a color for variables badly represented. |
| titulos | a character vector of length 2 specifying the titles to use on legend. |
| etq | a boolean, whether to add label to graph or not. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
data("poison", package = "FactoMineR")
poison.active <- poison[1:55, 5:15]
p <- FactoMineR::MCA(poison.active, graph = FALSE)
e_afcmcat_3D(p)
```

e_afcmcat

AFCM plot of categories

Description

AFCM plot of categories

Usage

```
e_afcmcat(
  modelo,
  axes = c(1, 2),
  colorCat = "forestgreen",
  cos2 = 0,
  colorCos = "darkorchid",
  titulos = c("Bien Representados", "Mal Representados")
)
```

Arguments

| | |
|----------|--|
| modelo | an object of class AFCM [FactoMineR]. |
| axes | a numeric vector of length 2 specifying the dimensions to be plotted. |
| colorCat | a color for the categories well represented. |
| cos2 | a numeric value from 0 to 1 specifying the quality of the categories. |
| colorCos | a color for the categories badly represented. |
| titulos | a character vector of length 2 specifying the titles to use on legend. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
data("poison", package = "FactoMineR")
poison.active <- poison[1:55, 5:15]
p <- FactoMineR::MCA(poison.active, graph = FALSE)
e_afcmcat(p)
```

e_afcmcat_3D

AFCM plot of categories in 3D

Description

AFCM plot of categories in 3D

Usage

```
e_afcmcat_3D(
  modelo,
  axes = c(1, 2, 3),
  colorCat = "forestgreen",
  cos2 = 0,
  colorCos = "darkorchid",
  titulos = c("Bien Representados", "Mal Representados")
)
```

Arguments

| | |
|----------|--|
| modelo | an object of class AFCM [FactoMineR]. |
| axes | a numeric vector of length 3 specifying the dimensions to be plotted. |
| colorCat | a color for the categories well represented. |
| cos2 | a numeric value from 0 to 1 specifying the quality of the categories. |
| colorCos | a color for categories badly represented. |
| titulos | a character vector of length 2 specifying the titles to use on legend. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
data("poison", package = "FactoMineR")
poison.active <- poison[1:55, 5:15]
p <- FactoMineR::MCA(poison.active, graph = FALSE)
e_afcmcat_3D(p)
```

e_afcmind

AFCM plot of individuals

Description

AFCM plot of individuals

Usage

```
e_afcmind(
  modelo,
  axes = c(1, 2),
  colorInd = "steelblue",
  cos2 = 0,
  colorCos = "firebrick",
  titulos = c("Bien Representados", "Mal Representados"),
  etq = T
)
```

Arguments

| | |
|----------|--|
| modelo | an object of class AFCM [FactoMineR]. |
| axes | a numeric vector of length 2 specifying the dimensions to be plotted. |
| colorInd | a color for the individuals well represented. |
| cos2 | a numeric value from 0 to 1 specifying the quality of the individuals. |
| colorCos | a color for individuals badly represented. |
| titulos | a character vector of length 2 specifying the titles to use on legend. |
| etq | a boolean, whether to add label to graph or not. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
data("poison", package = "FactoMineR")
poison.active <- poison[1:55, 5:15]
p <- FactoMineR::MCA(poison.active, graph = FALSE)
e_afcmind(p)
```

e_afcmind_3D

AFCM plot of individuals in 3D

Description

AFCM plot of individuals in 3D

Usage

```
e_afcmind_3D(  
  modelo,  
  axes = c(1, 2, 3),  
  colorInd = "steelblue",  
  cos2 = 0,  
  colorCos = "firebrick",  
  titulos = c("Bien Representados", "Mal Representados"),  
  etq = T  
)
```

Arguments

| | |
|----------|--|
| modelo | an object of class AFCM [FactoMineR]. |
| axes | a numeric vector of length 3 specifying the dimensions to be plotted. |
| colorInd | a color for the individuals well represented. |
| cos2 | a numeric value from 0 to 1 specifying the quality of the individuals. |
| colorCos | a color for individuals badly represented. |
| titulos | a character vector of length 2 specifying the titles to use on legend. |
| etq | a boolean, whether to add label to graph or not. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
data("poison", package = "FactoMineR")
poison.active <- poison[1:55, 5:15]
p <- FactoMineR::MCA(poison.active, graph = FALSE)
e_afcmind_3D(p)
```

e_afcmvar

AFCM plot of variables

Description

AFCM plot of variables

Usage

```
e_afcmvar(modelo, axes = c(1, 2), colorVar = "forestgreen")
```

Arguments

modelo an object of class AFCM [FactoMineR].
axes a numeric vector of length 2 specifying the dimensions to be plotted.
colorVar a color for the variables.

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
data("poison", package = "FactoMineR")
poison.active <- poison[1:55, 5:15]
p <- FactoMineR::MCA(poison.active, graph = FALSE)
e_afcmvar(p)
```

e_afcmvar_3D *AFCM plot of variables in 3D*

Description

AFCM plot of variables in 3D

Usage

```
e_afcmvar_3D(modelo, axes = c(1, 2, 3), colorVar = "forestgreen")
```

Arguments

modelo an object of class AFCM [FactoMineR].
axes a numeric vector of length 3 specifying the dimensions to be plotted.
colorVar a color for the variables well represented.

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
data("poison", package = "FactoMineR")  
poison.active <- poison[1:55, 5:15]  
p <- FactoMineR::MCA(poison.active, graph = FALSE)  
e_afcmvar_3D(p)
```

e_afcrow *AFC plot of individuals*

Description

AFC plot of individuals

Usage

```
e_afcrow(  
  modelo,  
  axes = c(1, 2),  
  colorRow = "steelblue",  
  cos2 = 0,  
  colorCos = "firebrick",  
  titulos = c("Bien Representados", "Mal Representados"),  
  etq = T  
)
```

Arguments

| | |
|----------|--|
| modelo | an object of class CA [FactoMineR]. |
| axes | a numeric vector of length 2 specifying the dimensions to be plotted. |
| colorRow | a color for the individuals well represented. |
| cos2 | a numeric value from 0 to 1 specifying the quality of the individuals. |
| colorCos | a color for individuals badly represented. |
| titulos | a character vector of length 2 specifying the titles to use on legend. |
| etq | a boolean, whether to add label to graph or not. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
p <- FactoMineR::CA(iris[, -5], graph = FALSE)  
e_afcrow(p)
```

e_afcrow_3D

AFC plot of individuals in 3D

Description

AFC plot of individuals in 3D

Usage

```
e_afcrow_3D(
  modelo,
  axes = c(1, 2, 3),
  colorRow = "steelblue",
  cos2 = 0,
  colorCos = "firebrick",
  titulos = c("Bien Representados", "Mal Representados"),
  etq = T
)
```

Arguments

| | |
|----------|--|
| modelo | an object of class CA [FactoMineR]. |
| axes | a numeric vector of length 3 specifying the dimensions to be plotted. |
| colorRow | a color for the individuals well represented. |
| cos2 | a numeric value from 0 to 1 specifying the quality of the individuals. |
| colorCos | a color for individuals badly represented. |
| titulos | a character vector of length 2 specifying the titles to use on legend. |
| etq | a boolean, whether to add label to graph or not. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
p <- FactoMineR::CA(iris[, -5], graph = FALSE)
e_afcrow_3D(p)
```

e_balloon

Balloonplot

Description

Balloonplot

Usage

```
e_balloon(datos)
```

Arguments

datos a data frame object.

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
e_balloon(iris)
```

e_cat *Barplot for categoric variable by clusters.*

Description

Barplot for categoric variable by clusters.

Usage

```
e_cat(clusters, var, colores = NULL, escalar = T)
```

Arguments

clusters a vector specifying the cluster of each individual.
var a factor column of a data.frame.
colores a vector of color for each cluster.
escalar a boolean value specifying if use percentage or real values.

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
clusters <- factor(kmeans(iris[, -5], 3)$cluster)  
e_cat(clusters, iris[, 5], colores = c("steelblue", "pink", "forestgreen"))
```

| | |
|---------|---|
| e_horiz | <i>Horizontal representation for centers of clusters.</i> |
|---------|---|

Description

Horizontal representation for centers of clusters.

Usage

```
e_horiz(centros, colores = NULL)
```

Arguments

| | |
|---------|---|
| centros | a data.frame object with the centers of the clusters. |
| colores | a vector of color for each cluster. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
clusters <- factor(kmeans(iris[, -5], 3)$cluster)
c <- calc.centros(iris[, -5], clusters)
e_horiz(c$real, c("steelblue", "pink", "forestgreen"))
```

| | |
|-----------|---------------------------------------|
| e_inercia | <i>Inertia plot of clusterization</i> |
|-----------|---------------------------------------|

Description

Inertia plot of clusterization

Usage

```
e_inercia(
  data,
  titulos = c("Inercia", "Inercia Inter-Clase", "Inercia Inter-Clase")
)
```

Arguments

`data` a data.frame object with the inertia values.
`titulos` a character vector of length 3 specifying the titles to use on legend.

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

| | |
|---------|-------------------------|
| e_jambu | <i>Jambu Elbow plot</i> |
|---------|-------------------------|

Description

Jambu Elbow plot

Usage

```
e_jambu(data, max.clusters)
```

Arguments

`data` a data.frame object.
`max.clusters` a numeric value specifying the number of times to generate the model.

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
e_jambu(iris[, -5], 10)
```

e_mapa

PCA plot of individuals colored by clusters

Description

PCA plot of individuals colored by clusters

Usage

```
e_mapa(pca.model, clusters, colores = NULL, ejes = c(1, 2), etq = F)
```

Arguments

| | |
|-----------|---|
| pca.model | an object of class PCA [FactoMineR]. |
| clusters | a vector specifying the cluster of each individual. |
| colores | a vector of color for each cluster. |
| ejes | a numeric vector of length 2 specifying the dimensions to be plotted. |
| etq | a boolean, whether to add label to graph or not. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
p <- FactoMineR::PCA(iris[, -5], graph = FALSE)
clusters <- factor(kmeans(iris[, -5], 3)$cluster)
e_mapa(p, clusters, c("steelblue", "pink", "forestgreen"), etq = FALSE)
```

e_mapa_3D

PCA plot of individuals colored by clusters

Description

PCA plot of individuals colored by clusters

Usage

```
e_mapa_3D(pca.model, clusters, colores = NULL, ejes = c(1, 2, 3), etq = F)
```

Arguments

`pca.modelo` an object of class PCA [FactoMineR].
`clusters` a vector specifying the cluster of each individual.
`colores` a vector of color for each cluster.
`ejes` a numeric vector of length 3 specifying the dimensions to be plotted.
`etq` a boolean, whether to add label to graph or not.

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
p <- FactoMineR::PCA(iris[, -5], graph = FALSE)
clusters <- factor(kmeans(iris[, -5], 3)$cluster)
e_mapa_3D(p, clusters, c("steelblue", "pink", "forestgreen"), etq = FALSE)
```

e_pcabi

PCA biplot

Description

PCA biplot

Usage

```
e_pcabi(
  modelo,
  axes = c(1, 2),
  colorInd = "steelblue",
  colorVar = "forestgreen",
  cos2Ind = 0,
  cos2Var = 0,
  colorIndCos = "firebrick",
  colorVarCos = "darkorchid",
  titulos = c("Bien Representados", "Mal Representados"),
  etq = F
)
```

Arguments

| | |
|-------------|--|
| modelo | an object of class PCA [FactoMineR]. |
| axes | a numeric vector of length 2 specifying the dimensions to be plotted. |
| colorInd | a color for the individuals well represented. |
| colorVar | a color for the variables well represented. |
| cos2Ind | a numeric value from 0 to 1 specifying the quality of the individuals. |
| cos2Var | a numeric value from 0 to 1 specifying the quality of the variables. |
| colorIndCos | a color for the individuals badly represented. |
| colorVarCos | a color for the variables badly represented. |
| titulos | a character vector of length 2 specifying the titles to use on legend. |
| etq | a boolean, whether to add label to graph or not. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
p <- FactoMineR::PCA(iris[, -5], graph = FALSE)
e_pcabi(p)
```

e_pcabi_3D

PCA biplot in 3D

Description

PCA biplot in 3D

Usage

```
e_pcabi_3D(
  modelo,
  axes = c(1, 2, 3),
  colorInd = "steelblue",
  colorVar = "forestgreen",
  cos2Ind = 0,
  cos2Var = 0,
  colorIndCos = "firebrick",
  colorVarCos = "darkorchid",
  titulos = c("Bien Representados", "Mal Representados"),
  etq = F
)
```

Arguments

| | |
|-------------|--|
| modelo | an object of class PCA [FactoMineR]. |
| axes | a numeric vector of length 3 specifying the dimensions to be plotted. |
| colorInd | a color for the individuals well represented. |
| colorVar | a color for the variables well represented. |
| cos2Ind | a numeric value from 0 to 1 specifying the quality of the individuals. |
| cos2Var | a numeric value from 0 to 1 specifying the quality of the variables. |
| colorIndCos | a color for individuals badly represented. |
| colorVarCos | a color for variables badly represented. |
| titulos | a character vector of length 2 specifying the titles to use on legend. |
| etq | a boolean, whether to add label to graph or not. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
p <- FactoMineR::PCA(iris[, -5], graph = FALSE)
e_pcabi_3D(p)
```

e_pcaind

PCA plot of individuals

Description

PCA plot of individuals

Usage

```
e_pcaind(
  modelo,
  axes = c(1, 2),
  colorInd = "steelblue",
  cos2 = 0,
  colorCos = "firebrick",
  titulos = c("Bien Representados", "Mal Representados"),
  etq = F
)
```

Arguments

| | |
|----------|--|
| modelo | an object of class PCA [FactoMineR]. |
| axes | a numeric vector of length 2 specifying the dimensions to be plotted. |
| colorInd | a color for the individuals well represented. |
| cos2 | a numeric value from 0 to 1 specifying the quality of the individuals. |
| colorCos | a color for individuals badly represented. |
| titulos | a character vector of length 2 specifying the titles to use on legend. |
| etq | a boolean, whether to add label to graph or not. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
p <- FactoMineR::PCA(iris[, -5], graph = FALSE)
e_pcaind(p)
```

e_pcaind_3D

PCA plot of individuals in 3D

Description

PCA plot of individuals in 3D

Usage

```
e_pcaind_3D(
  modelo,
  axes = c(1, 2, 3),
  colorInd = "steelblue",
  cos2 = 0,
  colorCos = "firebrick",
  titulos = c("Bien Representados", "Mal Representados"),
  etq = F
)
```

Arguments

| | |
|----------|--|
| modelo | an object of class PCA [FactoMineR]. |
| axes | a numeric vector of length 3 specifying the dimensions to be plotted. |
| colorInd | a color for the individuals well represented. |
| cos2 | a numeric value from 0 to 1 specifying the quality of the individuals. |
| colorCos | a color for individuals badly represented. |
| titulos | a character vector of length 2 specifying the titles to use on legend. |
| etq | a boolean, whether to add label to graph or not. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
p <- FactoMineR::PCA(iris[, -5], graph = FALSE)
e_pcaind_3D(p)
```

| | |
|----------|------------------------------|
| e_pcavar | <i>PCA plot of variables</i> |
|----------|------------------------------|

Description

PCA plot of variables

Usage

```
e_pcavar(  
  modelo,  
  axes = c(1, 2),  
  colorVar = "forestgreen",  
  cos2 = 0,  
  colorCos = "darkorchid",  
  titulos = c("Bien Representados", "Mal Representados")  
)
```

Arguments

| | |
|----------|--|
| modelo | an object of class PCA [FactoMineR]. |
| axes | a numeric vector of length 2 specifying the dimensions to be plotted. |
| colorVar | a color for the variables well represented. |
| cos2 | a numeric value from 0 to 1 specifying the quality of the variables. |
| colorCos | a color for the variables badly represented. |
| titulos | a character vector of length 2 specifying the titles to use on legend. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
p <- FactoMineR::PCA(iris[, -5], graph = FALSE)
e_pcavar(p)
```

e_pcavar_3D

PCA plot of variables in 3D

Description

PCA plot of variables in 3D

Usage

```
e_pcavar_3D(
  modelo,
  axes = c(1, 2, 3),
  colorVar = "forestgreen",
  cos2 = 0,
  colorCos = "darkorchid",
  titulos = c("Bien Representados", "Mal Representados")
)
```

Arguments

| | |
|----------|--|
| modelo | an object of class PCA [FactoMineR]. |
| axes | a numeric vector of length 3 specifying the dimensions to be plotted. |
| colorVar | a color for the variables well represented. |
| cos2 | a numeric value from 0 to 1 specifying the quality of the variables. |
| colorCos | a color for variables badly represented. |
| titulos | a character vector of length 2 specifying the titles to use on legend. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
p <- FactoMineR::PCA(iris[, -5], graph = FALSE)
e_pcavar_3D(p)
```

e_radar

Radar representation for centers of clusters.

Description

Radar representation for centers of clusters.

Usage

```
e_radar(centros, colores = NULL)
```

Arguments

| | |
|---------|---|
| centros | a data.frame object with the centers of the clusters. |
| colores | a vector of color for each cluster. |

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
clusters <- factor(kmeans(iris[, -5], 3)$cluster)
c <- calc.centros(iris[, -5], clusters)
e_radar(c$porcentual, c("steelblue", "pink", "forestgreen"))
```

e_silhouette

Silhouette plot

Description

Silhouette plot

Usage

```
e_silhouette(data, max.clusters)
```

Arguments

data a data.frame object.
max.clusters a numeric value specifying the number of times to generate the model.

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
e_silhouette(iris[, -5], 10)
```

e_vert *Vertical representation for centers of clusters.*

Description

Vertical representation for centers of clusters.

Usage

```
e_vert(centros, colores = NULL)
```

Arguments

centros a data.frame object with the centers of the clusters.
colores a vector of color for each cluster.

Value

echarts4r plot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
clusters <- factor(kmeans(iris[, -5], 3)$cluster)
c <- calc.centros(iris[, -5], clusters)
e_vert(c$real, c("steelblue", "pink", "forestgreen"))
```

gg_dendrograma *Dendrogram plot*

Description

Dendrogram plot

Usage

```
gg_dendrograma(model, k, colors = NULL)
```

Arguments

model an object of class hclust.
k a vector specifying the cluster of each individual.
colors a vector of color for each cluster.

Value

ggplot

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

| | |
|---------------|--------------------------------|
| inercia.total | <i>Calculate total inertia</i> |
|---------------|--------------------------------|

Description

Calculate total inertia

Usage

```
inercia.total(DF)
```

Arguments

DF a data.frame object.

Value

numeric

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

| | |
|---------|----------------------------------|
| run_app | <i>Run the Shiny Application</i> |
|---------|----------------------------------|

Description

Run the Shiny Application

Usage

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

Arguments

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

Examples

```
if(interactive()) {  
  run_app()  
}
```

WP

Calculate intra-class inertia

Description

Calculate intra-class inertia

Usage

```
WP(DF, clusters)
```

Arguments

DF a data.frame object.
clusters a vector specifying the cluster of each individual.

Value

numeric

Author(s)

Diego Jimenez <diego.jimenez@promidat.com>

Examples

```
m <- hclust(dist(iris[, -5]))  
WP(iris[, -5], cutree(m, 3))
```

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