Package 'Statsomat'

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Type Package

Title Shiny Apps for Automated Data Analysis and Automated Interpretation

Version 1.1.0

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Imports shiny, rmarkdown, data.table, readr, shinydisconnect, knitr, kableExtra, car, DDoutlier, energy, corrplot, ggplot2, gridExtra, reshape2

Suggests MASS, boot, nortest, lmtest, DescTools, psych, Hmisc, PerformanceAnalytics, reticulate, fastDummies, semTools, semPlot, FactoMineR, FactoInvestigate, factoextra, rrcov, methods, parallel, graphics, imputeMissings, onewaytests

SystemRequirements For all functions resp. apps: pandoc, LaTeX. For the edapy() function resp. Statsomat/EDAPY app: Python (>=3).

Description Shiny apps for automated data analysis, annotated outputs and human-readable interpretation in natural language. Designed especially for learners and applied researchers. Currently available methods: EDA, EDA with Python, Correlation Analysis, Principal Components Analysis, Confirmatory Factor Analysis.

License AGPL

URL https://statsomat.com

Encoding UTF-8

RoxygenNote 7.1.1

NeedsCompilation no

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Repository CRAN

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R topics documented:

`cfa` *Confirmatory Factor Analysis*

Description

A Shiny app for automated Confirmatory Factor Analysis (CFA) based on the R package lavaan. Single-group, first-order CFA for datasets up to 5000 observations, 25 (approximately) continuous variables and 5000 KB. An interpretation in natural language and the R Code to reproduce the results is included in the report. Run the app locally by calling the function or launch it directly in the web from https://statsomat.shinyapps.io/Confirmatory-Factor-Analysis. Follow the Instructions described in the GUI to use the app and generate a report. Check also the GitHub repository https://github.com/Statsomat/CFA.

Usage

```
cfa()
```

Value

Shiny app opens in viewer or browser.

Examples

```
## Not run:
library(Statsomat)
cfa()

## End(Not run)
```

corrana *Correlation Analysis*

Description

A Shiny app for automated Correlation Analysis for (approximately) continuous variables. An interpretation in plain English and the R Code to reproduce the results is included in the report. Run the app locally by calling the function or launch it directly in the web from https://statsomat.shinyapps.io/Correlations. Follow the Instructions described in the GUI to use the app and generate a report. Check also the GitHub repository https://github.com/Statsomat/CORRANA.

Usage

```
corrana()
```

Value

Shiny app opens in viewer or browser.

Examples

```
## Not run:
library(Statsomat)
corrana()

## End(Not run)
```

edapy *Exploratory Data Analysis with Python*

Description

A Shiny app for automated Exploratory Data Analysis with Python, based on the R interface to Python reticulate. Run the app locally by calling the function or launch it directly in the web from https://statsomat.shinyapps.io/edapy. Follow the Instructions in the GUI of the app to generate a PDF report or Python code to reproduce numerical and graphical results. Check also the GitHub repository of the app for more details https://github.com/Statsomat/edapy. System Requirements: Python >=3. Imports `numpy`, `pandas`, `seaborn`, `matplotlib`, `scipy`, `statsmodels`, `tabulate`, `sys`, `warnings`.

Usage

```
edapy()
```

Value

Shiny app opens in viewer or browser.

Examples

```
## Not run:
library(Statsomat)
edapy()

## End(Not run)
```

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edar *Exploratory Data Analysis with R*

Description

A Shiny app for automated Exploratory Data Analysis with R. Run the app locally by calling the function or launch it directly in the web from https://statsomat.shinyapps.io/Descriptive_statistics/. Follow the Instructions described in the GUI to use the app and generate a report. Check also the GitHub repository https://github.com/Statsomat/edar.

Usage

```
edar()
```

Value

Shiny app opens in viewer or browser.

Examples

```
## Not run:
library(Statsomat)
edar()

## End(Not run)
```

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pca *Principal Components Analysis*

Description

A Shiny app for automated Principal Components Analysis (PCA) based on the R package factominer. An interpretation in plain English and the R Code to reproduce the results is included in the report. Follow the Instructions on the webpage of the app https://statsomat.shinyapps.io/Principal-components-analysis/ to generate the report. Check also the GitHub repository https://github.com/Statsomat/PCA.

Usage

```
pca()
```

Value

Shiny app opens in viewer or browser.

Examples

```
## Not run:
library(Statsomat)
pca()

## End(Not run)
```

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