Package: airship (via r-universe)

December 6, 2024

Title Visualization of Simulated Datasets with Multiple Simulation Input Dimensions

Version 1.4.3

Description Plots simulation results of clinical trials. Its main feature is allowing users to simultaneously investigate the impact of several simulation input dimensions through dynamic filtering of the simulation results. A more detailed description of the app can be found in Meyer et al. <DOI:10.1016/j.softx.2023.101347> or the vignettes on 'GitHub'.

BugReports https://github.com/el-meyer/airship/issues

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Encoding UTF-8

RoxygenNote 7.3.1

Depends R (>= 2.10), shiny, shinyBS

Imports DT, shinybusy, plotly, dplyr, tidyselect, tidyr, stringr, colourpicker, shinyWidgets, shinydashboard, scales, Cairo, ggplot2, rlang, magrittr, shinyjs, data.table, shinyalert, vctrs, mvtnorm

LazyData true

Suggests knitr, rmarkdown, ggpubr

VignetteBuilder knitr

NeedsCompilation no

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Date/Publication 2024-12-05 18:40:10 UTC

Config/pak/sysreqs libcairo2-dev make libicu-dev libssl-dev zlib1g-dev

Contents

`airship` *Runs the Shiny app "AIRSHIP".*

Description

Runs the Shiny app "AIRSHIP".

Usage

```
airship(
  dfData = NULL,
  cLastInputVar = NULL,
  cReplicationVar = NULL,
  bIsFacts = FALSE
)
```

Arguments

`dfData`	Dataset that should be plotted by Airship; can be NULL if upload should be done within the app.
`cLastInputVar`	Optional and only useful in combination with dfData. Character name of last input variable.
`cReplicationVar`	Optional and only useful in combination with dfData. Character name of simulation replication variable.
`bIsFacts`	Boolean variable; is the supplied dfData a FACTS aggregated simulation file.

Value

No return value

Examples

```
if(interactive()){
airship()
}

# See Vignette.
```

ExampleData1 *Example Data 1*

Description

An artificially simulated dataset containing bivariate normal outcomes. Outcomes depend on four input variables in a very simple manner. For each set of input variables, 1000 replications are simulated.

Usage

```
ExampleData1
```

Format

An object of class `data.frame` with 81000 rows and 7 columns.

Examples

```
input1 <- c("A", "B", "C")
input2 <- c(1, 2, 3)
input3 <- c("Z", "Y", "X")
input4 <- c(11, 12, 13)
replications <- 1:1000

scenarios <-
  expand.grid(
    replications = replications,
    input1 = input1,
    input2 = input2,
    input3 = input3,
    input4 = input4
  )

for (i in 1:nrow(scenarios)) {

  var <- ifelse(scenarios$input1[i] == "A", 1, 10)
  cor <- ifelse(scenarios$input3[i] == "Z", 0.7, 0.1)

  out <- mvtnorm::rmvnorm(
    1,
    mean = c(scenarios$input2[i], scenarios$input4[i]),
    sigma = matrix(c(var, cor, cor, var), nrow = 2)
  )

  scenarios$output1[i] <- out[1]
  scenarios$output2[i] <- out[2]

}
```

```
ExampleData1 <- scenarios
```

`ExampleData2` *Example Data 2*

Description

Simulated dataset from Meyer et al. (2022) https://doi.org/10.1002/pst.2194.

Usage

```
ExampleData2
```

Format

An object of class `data.frame` with 10080 rows and 18 columns.

Source

https://github.com/el-meyer/airship/blob/master/data/ExampleDataNASH.csv

Index