

Package ‘lulab.utils’

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Title Supporting Functions Maintained by Zhen Lu

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Description Miscellaneous functions commonly used by LuLab. This package aims to help more researchers on epidemiology to perform data management and visualization more efficiently.

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URL <https://github.com/Leslie-Lu/lulab.utils>

BugReports <https://github.com/Leslie-Lu/lulab.utils/issues>

Encoding UTF-8

Imports boot, dplyr, httr2, magrittr, openxlsx, rappdirs, stringr,
table1, utils

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VignetteBuilder knitr

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Contents

check_cha	2
check_wget	3
extract_logistic_model	3
round2	4
Table1	5
test_mirror	6
use_wget	6

Index**8**

check_cha	<i>check_cha</i>
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Description

Check for missing values for character columns

Usage

```
check_cha(col, df, verbose = TRUE)
```

Arguments

col	a character variable name
df	a data.frame
verbose	logical, controlling the output

Details

This function is used to check the distribution of character variables in the data frame.

Value

a distribution table of the character variable in the data frame

Author(s)

Zhen Lu

Examples

```
data("melanoma", package = "boot")
melanoma2 <- melanoma
check_cha('status', melanoma2)
# or
mapply(check_cha, 'status', MoreArgs= list(melanoma2))
```

`check_wget`*check_wget*

Description

Check if wget is installed

Usage

```
check_wget()
```

Details

This function is used to check if wget is installed on the system.

Value

a logical value indicating whether wget is installed

Author(s)

Zhen Lu

Examples

```
check_wget()
```

`extract_logistic_model`*extract_logistic_model*

Description

Extract results from a fitted model.

Usage

```
extract_logistic_model(  
  model,  
  markers_name,  
  n_independent_metabolites,  
  digits,  
  effective_size,  
  case_size,  
  control_size,  
  outcome_name  
)
```

Arguments

model	The fitted logistic model object.
markers_name	A character vector of marker names.
n_independent_metabolites	The number of independent metabolites.
digits	The number of decimal places to round to.
effective_size	A numeric vector containing effective sample sizes.
case_size	The number of cases.
control_size	The number of controls.
outcome_name	The name of the outcome variable.

Details

This function extracts relevant results from a fitted logistic model and formats them for reporting.

Value

A named vector containing the extracted results.

round2	<i>round2</i>
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Description

Round a number to a specified number of decimal places.

Usage

```
round2(x, digits = 0)
```

Arguments

x	The numeric input to be rounded.
digits	The number of decimal places to round to, Default: digits

Details

This function rounds the input number to the specified number of decimal places.

Value

The rounded numeric value.

Table1	<i>Make a Table 1 summary</i>
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Description

Create a stratified Table 1, save it as an Excel workbook, and return the table as a data frame.

Usage

```
Table1(df, ycol, xcol, xlabels = NULL, result_dir, verbose = TRUE)
```

Arguments

df	A data frame.
ycol	A single character string naming the grouping variable.
xcol	A character vector naming variables to summarize.
xlabels	Optional labels for the groups. Defaults to the observed levels of ycol.
result_dir	Directory where Table1.xlsx will be saved.
verbose	Logical; if TRUE, print the output path.

Value

A data frame containing the rendered Table 1.

Author(s)

Zhen Lu

Examples

```
data("melanoma", package = "boot")
melanoma2 <- melanoma
melanoma2$status <- factor(
  melanoma2$status,
  levels = c(2, 1, 3),
  labels = c("Alive", "Melanoma death", "Non-melanoma death")
)
Table1(
  df = melanoma2,
  ycol = "status",
  xcol = c("time", "age", "sex"),
  result_dir = tempdir()
)
```

test_mirror *test_mirror*

Description

Test speed of CRAN mirror

Usage

```
test_mirror(region, verbose = TRUE)
```

Arguments

region a character string, the region of the CRAN mirror, e.g. 'China'
verbose logical, controlling the output

Details

This function is used to test the speed of CRAN mirror.

Value

a data.frame with the name, URL, and download time of the fastest CRAN mirror

Author(s)

Zhen Lu

Examples

```
test_mirror('China')
```

use_wget *use_wget*

Description

Use wget to download files

Usage

```
use_wget(use = TRUE)
```

Arguments

use a logical value, controlling the download method

use_wget

7

Details

This function is used to set the download method.

Value

a logical value indicating whether wget is used

Author(s)

Zhen Lu

Examples

```
use_wget(use = TRUE)
getOption("download.file.method")
getOption("download.file.extra")
test_url <- "https://eternallybored.org/misc/wget/1.21.4/64/wget.exe"
test_destfile <- tempfile()
download.file(test_url, destfile = test_destfile)
```

Index

check_cha, 2
check_wget, 3

extract_logistic_model, 3

round2, 4

Table1, 5
test_mirror, 6

use_wget, 6