Package: closeloop (via r-universe)

September 13, 2024

Type Package

Title Integrate Single-Arm Observational Data in Network Meta Analysis

Version 0.1.0

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Description This package Calculates distance between single-arm observational studies by using co-variates information to remove heterogeneity in Network Meta-Analysis in Randomized clinical trials. This package will facilitate the inclusion of observational data in Network Meta ANalysis, thereby enhancing the comprehensiveness and robustness of comparative effectiveness research.The proposed R package will provide researchers with a powerful tool to systematically adjust for heterogeneity in single-arm observational studies, enabling their integration into NMAs. This will improve the accuracy and reliability of comparative effectiveness research, ultimately informing better healthcare decisions. Schmitz S et. al. The use of single armed observational data to closing the gap in otherwise disconnected evidence networks: a network meta-analysis in multiple myeloma. BMC Med Res Methodol. 2018 Jun 28;18(1):66. doi: 10.1186/s12874-018-0509-7. PMID: 29954322; PMCID: PMC6022299.

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Encoding UTF-8

LazyData true

Imports combinat

RoxygenNote 7.3.1

Depends R (>= 3.5.0)

Suggests knitr, rmarkdown

VignetteBuilder knitr

URL https://github.com/heorlytics/closeloop

Repository https://heorlytics.r-universe.dev

RemoteUrl https://github.com/heorlytics/closeloop

RemoteRef HEAD

RemoteSha 60485b7ec17968511fb98c9d58abede06354b0c3

Contents

calc_dist	*Title To calculate distance between two studies using covariate information*

Description

Title To calculate distance between two studies using covariate information

Usage

```
calc_dist(df, col_names, Study = "Study", Treat = "Treatment", weights, digits)
```

Arguments

df	A data frame consists of columns namely "Study", "Treatment", and at least one covariate.
col_names	A vector of column names specifying covariate names.
Study	A column name in a data frame named as "Study" specifying study names.
Treat	A column name in a data frame named as "Treatment" specifying treatment names.
weights	A variable in which the results of specify_weight() function was stored.
digits	A numeric value indicating the number of decimal places in the Distance calculated.

Value

Data frame

Author(s)

Shubhram Pandey <shubhram1992@gmail.com>

Examples

```
attach(exampleData)
var = c("Male","Age")
weights = specify_weight(var, weights = c(0.5,0.5))
weights
dist = calc_dist(df = exampleData, col_names = var, weights = weights,digits = 4)
dist
```

---

check_data	*Function to check if all values are numeric in data*

Description

Function to check if all values are numeric in data

Usage

```
check_data(df, col_names = NULL)
```

Arguments

df   A data frame contains columns that represent covariates

col_names   A numeric vector of covariates that can be binary or continuous

Value

logical

Author(s)

Shubhram Pandey <shubhram1992@gmail.com>

Examples

```
attach(exampleData)
var = c("Age","Male")
x = check_data(df = exampleData, col_names = var)
x
```

---

exampleData *This is a simulated data*

Description

Data were extracted from the studies included.

Usage

```
exampleData
```

Format

A data frame with with the 4 following variables (columns).

Study This character vector represents number of the study.

Male This vector represents the proportion of males.

Age This vector represents the average age in each study.

Treatment This vector represents the treatment. ...

Details

A simulated data were created to run examples.

Author(s)

Shubhram Pandey <shubhram.pandey@heorlytics.com>

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is_prop *Function to check if columns are proportions*

Description

Function to check if columns are proportions

Usage

```
is_prop(df, col_names)
```

Arguments

df	a data frame to be checked
col_names	column names to be checked

Value

list

Author(s)

Shubhram Pandey <shubhram1992@gmail.com>

Examples

```
#' attach(exampleData)
result <- is_prop(exampleData,c("Male","Age"))
result
```

---

specify_weight   *Title specify_weight*

Description

Title specify_weight

Usage

```
specify_weight(var, weights)
```

Arguments

var	Variables for which weights can be assigned
weights	weights in same sequence as variables

Value

list

Author(s)

Shubhram Pandey <shubhram1992@gmail.com>

Examples

```
var = c("Male","Age")
weights = specify_weight(var, weights = c(0.5,0.5))
weights
```

Index