Package: besthr (via r-universe)

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Type Package

Title Generating Bootstrap Estimation Distributions of HR Data

Version 0.3.2

Description Creates plots showing scored HR experiments and plots of distribution of means of ranks of HR score from bootstrapping. Authors (2019) <doi:10.5281/zenodo.3374507>.

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Encoding UTF-8

Imports dplyr, ggplot2, ggridges, magrittr, patchwork, rlang, stringr, tibble

RoxygenNote 7.1.2

Suggests knitr, rmarkdown, readr

VignetteBuilder knitr

NeedsCompilation no

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Contents

`estimate` *Perform bootstrap estimation of confidence intervals of ranked HR scores*

Description

`estimate` carries out estimation of bootstrap confidence intervals on ranked score data. Returns a `hrest` object of the result Proceeeds by calculating score ranks, then bootstrapping ranks in non-control groups retaining the mean for each bootstrap iteration. Calculates low and high quantiles of bootstrap mean distributions for each group. If technical replicates are provided in a second grouping column these will be averaged before proceeding.

Usage

```
estimate(df, ..., control = "A", nits = 100, low = 0.025, high = 0.975)
```

Arguments

`df`	data frame of score and group data. Contains minimally a score and group column
`...`	bare names of columns to use, minimally the score column and the group column in that order. Optionally a third technical replicate column can be provided
`control`	the value of the grouping column taken to be the control group
`nits`	the number of bootstap iterations to be done
`low`	the low probability value of the quantile
`high`	the high probability value of the quantile

Value

a list object of class "hrest"

Examples

```
d1 <- make_data()
estimate(d1, score, group)

d2 <- make_data2()
estimate(d2, score_column_name, sample_column_name, rep_column_name )


d3 <- make_data3()
estimate(d3, score, sample, rep, nits = 1000)
```

make_data — *return a sample data set of random values for two groups*

Description

return a sample data set of random values for two groups

Usage

```
make_data()
```

Value

tibble of random values for two groups

Examples

```
d1 <- make_data()
```

make_data2 — *return a sample data set of random values for two groups with three technical reps per group*

Description

return a sample data set of random values for two groups with three technical reps per group

Usage

```
make_data2()
```

Value

tibble of random values for two groups with three technical reps per group

Examples

```
d2 <- make_data2()
```

make_data3 *return a sample data set of random values for three groups with three technical reps per group*

Description

@examples

Usage

```
make_data3()
```

Details

d3 <- make_data3()

Value

tibble of random values for three groups with three technical reps per group

plot.hrest *plots the* hrest *object*

Description

returns a ggplot object representing the hrest object from estimate. The content of left panel varies according to the value of the which parameter. If which = "rank_simulation" is used a plot of rank score values will be plotted in the left panel. In this case technical replicates will be averaged if provided. If which = "just_data" a plot of scores only is created and technical replicates are displayed as is. In each case, the right hand panel shows the rank bootstrap distribution and confidence interval boundaries for all non- control groups.

Usage

```
## S3 method for class 'hrest'
plot(x, ..., which = "rank_simulation")
```

Arguments

x	the hrest object from estimate
...	Other parameters
which	the type of left hand panel to create. Either "rank_simulation" or "just_data"

Value

ggplot object

Examples

```
d1 <- make_data()
hr_est <- estimate(d1, score, group)
plot(hr_est)
```

`print.hrest` *print a summary of the hrest object*

Description

print a summary of the hrest object

Usage

```
## S3 method for class 'hrest'
print(x, ...)
```

Arguments

`x`	hrest object
`...`	other parameters

Value

null

Examples

```
d1 <- make_data()
hr_est <- estimate(d1, score, group)
print(hr_est)
```

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