Package 'bayeslincom'

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Type Package

Title Linear Combinations of Bayesian Posterior Samples

Version 1.3.0

Description Computes point estimates, standard deviations, and credible intervals for linear combinations of posterior samples. Optionally performs region practical equivalence (ROPE) tests as described in Kruschke and Liddell (2018) <doi:10.3758/s13423-016-1221-4>.

Depends R (>= 3.6.0)

License GPL-2

Encoding UTF-8

Imports ggplot2 (>= 3.3.2), methods, stats

Suggests BGGM (>= 2.0.4), testthat

RoxygenNote 7.1.1

BugReports https://github.com/josue-rodriguez/bayeslincom/issues

NeedsCompilation no

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Repository CRAN

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R topics documented:

lin_comb *Perform a linear combination of posterior samples*

Description

Perform a linear combination of posterior samples

Usage

```
lin_comb(lin_comb, obj, ci = 0.9, rope = NULL, contrast = NULL)
```

Arguments

lin_comb	A string specifying a linear combination of variables, or a list of variable names if using contrast.
obj	An object of class BGGM, bbcor, or a data.frame of posterior samples.
ci	The level for which a credible interval should be computed.
rope	Specify a ROPE. Optional.
contrast	A contrast matrix specifying which combinations to test.

Value

An object of class lin_comb

Examples

```
# data
if (require(BGGM)) library(BGGM)
Y <- ptsd

# names
colnames(Y) <- letters[1:20]

# estimate model
est <- estimate(Y)

# test
bggm_comb <- lin_comb("a--c + a--d > b--c + b--d",
                      obj = est,
                      ci = 0.90,
                      rope = c(-0.1, 0.1))

# print
bggm_comb

# Using a contrast matrix to test pairwise differences
vars <- c("a--c", "a--d", "b--c")
```

```
contrast_mat <- matrix(c(1, -1, 0,
                         1, 0, -1,
                         0, 1, -1), nrow = 3, byrow = TRUE)

bggm_comb <- lin_comb(vars,
                      obj = est,
                      ci = 0.90,
                      contrast = contrast_mat)
# print
bggm_comb
```

`plot.bayeslincom` *Plot a linear combination of posterior samples*

Description

Plot a linear combination of posterior samples

Usage

```
## S3 method for class 'bayeslincom'
plot(
  x,
  point_col = "black",
  hist_col = "black",
  hist_fill = "gray",
  bar_col = "steelblue",
  bins = 30,
  display_comb_strings = TRUE,
  ...
)
```

Arguments

`x`	An object of class `bayeslincom`
`point_col`	Color for point indicating mean of posterior
`hist_col`	Color for histogram edges
`hist_fill`	Color for histogram bars
`bar_col`	Color of bar for credible interval
`bins`	Number of bins
`display_comb_strings`	If `TRUE`, displays full strings for combinations in `ggplot` facets when there is more than one combination in `x`
`...`	Currently ignored

Value

An object of class ggplot

Examples

```
if (require(BGGM)) library(BGGM)
Y <- ptsd
colnames(Y) <- letters[1:20]
est <- estimate(Y)
bggm_comb <- lin_comb("a--c + a--d > b--c + b--d",
                      obj = est,
                      ci = 0.90,
                      rope = c(-0.1, 0.1))
plot(bggm_comb)
```

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print.bayeslincom *Print formatted summary of a* bayeslincom *object*

Description

Print formatted summary of a bayeslincom object

Usage

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

Arguments

x	An object of class bayeslincom
...	Other arguments to be passed to print

Value

A formatted summary of posterior samples

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