betaMC: Monte Carlo for Regression Effect Sizes

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Description

Generates Monte Carlo confidence intervals for standardized regression coefficients (beta) and other effect sizes, including multiple correlation, semipartial correlations, improvement in R-squared, squared partial correlations, and differences in standardized regression coefficients, for models fitted by `lm()`. `betaMC` combines ideas from Monte Carlo confidence intervals for the indirect effect (Pesigan & Cheung, 2023) and the sampling covariance matrix of regression coefficients (Dudgeon, 2017) to generate confidence intervals effect sizes in regression.

Installation

You can install the CRAN release of `betaMC` with:

```
install.packages("betaMC")
```

You can install the development version of `betaMC` from GitHub with:

```
if (!require("remotes")) install.packages("remotes")
remotes::install_github("jeksterslab/betaMC")
```

More Information

See GitHub Pages for package documentation.

References

Dudgeon, P. (2017). Some improvements in confidence intervals for standardized regression coefficients. *Psychometrika*, *82*(4), 928–951. https://doi.org/10.1007/s11336-017-9563-z

Pesigan, I. J. A., & Cheung, S. F. (2023). Monte Carlo confidence intervals for the indirect effect with missing data. *Behavior Research Methods*, *56*(3), 1678–1696. https://doi.org/10.3758/s13428-023-02114-4

R Core Team. (2024). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing. Vienna, Austria. https://www.R-project.org/