## Session Info

#### Ivan Jacob Agaloos Pesigan

### Session

```
sessionInfo()
#> R version 4.3.3 (2024-02-29)
#> Platform: x86_64-pc-linux-gnu (64-bit)
#> Running under: Ubuntu 22.04.4 LTS
#>
#> Matrix products: default
          / usr/lib/x86\_64-linux-gnu/openblas-pthread/libblas.so.3
#> LAPACK: /usr/lib/x86_64-linux-gnu/openblas-pthread/libopenblasp-r0.3.20.so; LAPACK version 3.10
#>
#> locale:
#> [1] LC_CTYPE=en_US.UTF-8
                             LC_NUMERIC=C
   [3] LC_TIME=en_US.UTF-8
                              LC_COLLATE=en_US.UTF-8
#> [5] LC_MONETARY=en_US.UTF-8 LC_MESSAGES=en_US.UTF-8
   [7] LC_PAPER=en_US.UTF-8
                                LC_NAME=C
#> [9] LC_ADDRESS=C
                                  LC_TELEPHONE=C
#> [11] LC_MEASUREMENT=en_US.UTF-8 LC_IDENTIFICATION=C
#>
#> time zone: Etc/UTC
```

```
#> tzcode source: system (glibc)
#> attached base packages:
#> [1] stats
                graphics grDevices utils
                                           datasets methods
                                                               base
#> other attached packages:
#> [1] rProject_0.0.10
#>
#> loaded via a namespace (and not attached):
#> [1] backports_1.4.1 R6_2.5.1
                                         lubridate_1.9.3 xfun_0.43
#> [5] magrittr_2.0.3
                        glue_1.7.0
                                         stringr_1.5.1
                                                          knitr_1.46
#> [9] timechange_0.3.0 generics_0.1.3
                                         lifecycle_1.0.4 xml2_1.3.6
#> [13] cli_3.6.2.9000
                        bibtex_0.5.1
                                         compiler_4.3.3
                                                          highr_0.10
#> [17] rprojroot_2.0.4 plyr_1.8.9
                                         httr_1.4.7
                                                           rstudioapi_0.16.0
#> [21] tools_4.3.3
                        evaluate_0.23
                                         Rcpp_1.0.12
                                                           RefManageR_1.4.0
#> [25] rlang_1.1.3
                        jsonlite_1.8.8
                                         stringi_1.8.3
```

## **Packages**

```
unname(installed.packages()[, 1])
     [1] "Amelia"
                           "arm"
                                            "betaDelta"
                                                              "bmemLavaan"
#>
     [5] "cffr"
                           "coda"
                                             "cTMed"
                                                              "mi"
     [9] "pkgdown"
                           "rProject"
                                             "rsem"
                                                              "sem"
#>
    [13] "semmcci"
                           "simStateSpace"
                                            "styler"
                                                              "abind"
    [17] "arrow"
                                             "AsioHeaders"
                           "ash"
                                                              "askpass"
    [21] "assertthat"
                           "backports"
                                             "base64enc"
                                                              "betaDelta"
```

#>	[25]	"betaMC"	"betaNB"	"betaSandwich"	"BH"
#>	[29]	"bibtex"	"BiocManager"	"bit"	"bit64"
#>	[33]	"bitops"	"blob"	"brew"	"brio"
#>	[37]	"broom"	"bslib"	"cachem"	"callr"
#>	[41]	"car"	"caracas"	"carData"	"cellranger"
#>	[45]	"cffr"	"checkmate"	"cli"	"clipr"
#>	[49]	"clock"	"cOde"	"collections"	"colorspace"
#>	[53]	"commonmark"	"conflicted"	"corpcor"	"covr"
#>	[57]	"cpp11"	"crayon"	"credentials"	"crosstalk"
#>	[61]	"cTMed"	"ctsem"	"curl"	"cyclocomp"
#>	[65]	"data.table"	"DBI"	"dbplyr"	"Deriv"
#>	[69]	"desc"	"deSolve"	"devtools"	"diagram"
#>	[73]	"dials"	"DiceDesign"	"diffobj"	"digest"
#>	[77]	"distributional"	"distro"	"doBy"	"docopt"
#>	[81]	"doFuture"	"downlit"	"dplyr"	"DT"
#>	[85]	"dtplyr"	"duckdb"	"dynr"	"dynUtils"
#>	[89]	"ellipse"	"ellipsis"	"evaluate"	"expm"
#>	[93]	"fansi"	"farver"	"fastmap"	"fclust"
#>	[97]	"fda"	"fdrtool"	"fds"	"FNN"
#>	[101]	"fontawesome"	"forcats"	"foreach"	"Formula"
#>	[105]	"fs"	"fst"	"fstcore"	"furrr"
#>	[109]	"future"	"future.apply"	"gargle"	"generics"
#>	[113]	"gert"	"ggplot2"	"ggrepel"	"gh"
#>	[117]	"gitcreds"	"glasso"	"glmnet"	"globals"
#>	[121]	"glue"	"googledrive"	"googlesheets4"	"gower"
#>	[125]	"GPfit"	"gridExtra"	"gtable"	"gtools"
#>	[129]	"hardhat"	"haven"	"hdrcde"	"here"

#>	[133]	"highr"	"Hmisc"	"hms"	"htmlTable"
#>	[137]	"htmltools"	"htmlwidgets"	"httpgd"	"httpuv"
#>	[141]	"httr"	"httr2"	"ids"	"ifaTools"
#>	[145]	"igraph"	"infer"	"ini"	"inline"
#>	[149]	"ipred"	"isoband"	"iterators"	"jomo"
#>	[153]	"jpeg"	"jquerylib"	"jsonlite"	"jsonvalidate"
#>	[157]	"kernlab"	"knitr"	"ks"	"labeling"
#>	[161]	"Lahman"	"languageserver"	"later"	"latex2exp"
#>	[165]	"lava"	"lavaan"	"lazyeval"	"lhs"
#>	[169]	"lifecycle"	"lintr"	"listenv"	"littler"
#>	[173]	"lme4"	"locfit"	"longMI"	"loo"
#>	[177]	"lubridate"	"magick"	"magrittr"	"markdown"
#>	[181]	"MatrixModels"	"matrixStats"	"mclust"	"memoise"
#>	[185]	"metaSEM"	"mice"	"microbenchmark"	"mime"
#>	[189]	"miniUI"	"minqa"	"mitml"	"mize"
#>	[193]	"mnormt"	"modeldata"	"modelenv"	"modelr"
		"mnormt" "multicool"	"modeldata"	"modelenv" "mvtnorm"	"modelr" "nloptr"
#>	[197]				
#> #>	[197] [201]	"multicool"	"munsell"	"mvtnorm"	"nloptr"
#> #> #>	[197] [201] [205]	"multicool" "numDeriv"	"munsell" "nycflights13"	"mvtnorm" "OpenMx"	"nloptr" "openssl"
#> #> #>	[197] [201] [205] [209]	"multicool" "numDeriv" "ordinal"	"munsell" "nycflights13" "pan"	"mvtnorm" "OpenMx" "parallelly"	"nloptr" "openssl" "parsnip"
#> #> #> #>	[197] [201] [205] [209] [213]	"multicool" "numDeriv" "ordinal" "patchwork"	"munsell" "nycflights13" "pan" "pbapply"	"mvtnorm" "OpenMx" "parallelly" "pbivnorm"	"nloptr" "openssl" "parsnip" "pbkrtest"
#> #> #> #> #>	[197] [201] [205] [209] [213] [217]	"multicool" "numDeriv" "ordinal" "patchwork" "pcaPP" "pkgconfig"	"munsell" "nycflights13" "pan" "pbapply" "pdftools" "pkgdown"	"mvtnorm" "OpenMx" "parallelly" "pbivnorm" "pillar" "pkgload"	"nloptr"  "openssl"  "parsnip"  "pbkrtest"  "pkgbuild"
#> #> #> #> #>	[197] [201] [205] [209] [213] [217] [221]	"multicool" "numDeriv" "ordinal" "patchwork" "pcaPP" "pkgconfig"	"munsell" "nycflights13" "pan" "pbapply" "pdftools" "pkgdown"	"mvtnorm" "OpenMx" "parallelly" "pbivnorm" "pillar" "pkgload"	"nloptr"  "openssl"  "parsnip"  "pbkrtest"  "pkgbuild"  "plogr"
#> #> #> #> #> #>	[197] [201] [205] [209] [213] [217] [221] [225]	"multicool" "numDeriv" "ordinal" "patchwork" "pcaPP" "pkgconfig" "plyr"	"munsell" "nycflights13" "pan" "pbapply" "pdftools" "pkgdown" "png"	"mvtnorm"  "OpenMx"  "parallelly"  "pbivnorm"  "pillar"  "pkgload"  "posterior"	"nloptr"  "openssl"  "parsnip"  "pbkrtest"  "pkgbuild"  "plogr"  "pracma"
#> #> #> #> #> #> #>	[197] [201] [205] [209] [213] [217] [221] [225] [229]	"multicool" "numDeriv" "ordinal" "patchwork" "pcaPP" "pkgconfig" "plyr" "praise"	"munsell" "nycflights13" "pan" "pbapply" "pdftools" "pkgdown" "png" "prettyunits"	"mvtnorm"  "OpenMx"  "parallelly"  "pbivnorm"  "pillar"  "pkgload"  "posterior"  "printr"	"nloptr"  "openssl"  "parsnip"  "pbkrtest"  "pkgbuild"  "plogr"  "pracma"  "processx"
#> #> #> #> #> #> #> #> #>	[197] [201] [205] [209] [213] [217] [221] [225] [225] [229]	"multicool" "numDeriv" "ordinal" "patchwork" "pcaPP" "pkgconfig" "plyr" "praise" "prodlim"	"munsell" "nycflights13" "pan" "pbapply" "pdftools" "pkgdown" "png" "prettyunits" "profvis"	"mvtnorm"  "OpenMx"  "parallelly"  "pbivnorm"  "pillar"  "pkgload"  "posterior"  "printr"  "progress"	"nloptr"  "openssl"  "parsnip"  "pbkrtest"  "pkgbuild"  "plogr"  "pracma"  "processx"  "progressr"

#>	[241]	"quarto"	"QuickJSR"	"R.cache"	"R.methodsS3"
#>	[245]	"R.00"	"R.utils"	"R6"	"ragg"
#>	[249]	"rainbow"	"rappdirs"	"rbibutils"	"rcmdcheck"
#>	[253]	"RColorBrewer"	"Rcpp"	"RcppArmadillo"	"RcppEigen"
#>	[257]	"RcppGSL"	"RcppParallel"	"RcppTOML"	"RCurl"
#>	[261]	"Rdpack"	"readr"	"readxl"	"recipes"
#>	[265]	"RefManageR"	"rematch"	"rematch2"	"remotes"
#>	[269]	"reprex"	"reshape2"	"reticulate"	"rex"
#>	[273]	"rhub"	"rlang"	"RMariaDB"	"rmarkdown"
#>	[277]	"roxygen2"	"rpf"	"RPostgres"	"rProject"
#>	[281]	"rprojroot"	"rsample"	"RSQLite"	"rstan"
#>	[285]	"rstantools"	"rstudioapi"	"rversions"	"rvest"
#>	[289]	"Ryacas"	"sass"	"scales"	"selectr"
#>	[293]	"semlbci"	"semmcci"	"sessioninfo"	"shape"
#>	[297]	"shiny"	"simStateSpace"	"slider"	"snow"
#>	[301]	"snowfall"	"sourcetools"	"SparseM"	"SQUAREM"
#>	[305]	"StanHeaders"	"stringi"	"stringr"	"styler"
#>	[309]	"symSEM"	"sys"	"systemfonts"	"tensorA"
#>	[313]	"testthat"	"textshaping"	"tibble"	"tidymodels"
#>	[317]	"tidyr"	"tidyselect"	"tidyverse"	"timechange"
#>	[321]	"timeDate"	"tinytex"	"tune"	"tzdb"
#>	[325]	"ucminf"	"unigd"	"urlchecker"	"usethis"
#>	[329]	"utf8"	"uuid"	"\8"	"vctrs"
#>	[333]	"viridis"	"viridisLite"	"vroom"	"waldo"
#>	[337]	"warp"	"whisker"	"whoami"	"withr"
#>	[341]	"workflows"	"workflowsets"	"xfun"	"xm12"
#>	[345]	"xmlparsedata"	"xopen"	"xtable"	"yaml"

#>	[349]	"yardstick"	"zip"	"base"	"boot"
#>	[353]	"class"	"cluster"	"codetools"	"compiler"
#>	[357]	"datasets"	"foreign"	"graphics"	"grDevices"
#>	[361]	"grid"	"KernSmooth"	"lattice"	"MASS"
#>	[365]	"Matrix"	"methods"	"mgcv"	"nlme"
#>	[369]	"nnet"	"parallel"	"rpart"	"spatial"
#>	[373]	"splines"	"stats"	"stats4"	"survival"
#>	[377]	"tcltk"	"tools"	"utils"	

# References

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

R Core Team. (2023). R: A language and environment for statistical computing. R Foundation for Statistical Computing. Vienna, Austria. https://www.R-project.org/