# Session Info

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### Session

```
sessionInfo()
#> R version 4.4.0 (2024-04-24)
#> Platform: x86_64-pc-linux-gnu
#> 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] lavaan_0.6-17
                     semmcci_1.1.4.9000 rProject_0.0.13
#>
#> loaded via a namespace (and not attached):
#> [1] httr_1.4.7
                     cli_3.6.3.9000 knitr_1.47
                                                     rlang_1.1.4
#> [5] xfun_0.45
                                       highr_0.11
                     stringi_1.8.4
                                                       generics_0.1.3
#> [9] jsonlite_1.8.8 glue_1.7.0
                                       backports_1.5.0 pbivnorm_0.6.0
#> [13] plyr_1.8.9
                      rprojroot_2.0.4 stats4_4.4.0
                                                       RefManageR_1.4.0
#> [17] quadprog_1.5-8 evaluate_0.24.0 lifecycle_1.0.4 stringr_1.5.1
#> [21] compiler_4.4.0 Rcpp_1.0.12
                                       timechange_0.3.0 bibtex_0.5.1
#> [25] R6_2.5.1
                       parallel_4.4.0 mnormt_2.1.1
                                                       magrittr_2.0.3
#> [29] tools_4.4.0 lubridate_1.9.3 xml2_1.3.6
```

# **Packages**

```
unname(installed.packages()[, 1])
     [1] "Amelia"
                            "arm"
                                               "bmemLavaan"
                                                                  "cli"
#>
     [5] "crayon"
                            "digest"
                                               "downlit"
                                                                  "evaluate"
#>
     [9] "mi"
                            "rlang"
                                               "rProject"
                                                                  "rsem"
    [13] "sem"
                            "semmcci"
                                               "tinytex"
                                                                  "xfun"
                                               "ash"
                                                                  "AsioHeaders"
#> [17] "abind"
                            "arrow"
```

#>	[21]	"askpass"	"assertthat"	"backports"	"base64enc"
#>	[25]	"betaDelta"	"betaMC"	"betaNB"	"betaSandwich"
#>	[29]	"BH"	"bibtex"	"BiocManager"	"bit"
#>	[33]	"bit64"	"bitops"	"blob"	"brew"
#>	[37]	"brio"	"broom"	"bslib"	"cachem"
#>	[41]	"callr"	"car"	"caracas"	"carData"
#>	[45]	"cellranger"	"cffr"	"checkmate"	"cli"
#>	[49]	"clipr"	"clock"	"coda"	"cOde"
#>	[53]	"collections"	"colorspace"	"commonmark"	"conflicted"
#>	[57]	"corpcor"	"covr"	"cowplot"	"cpp11"
#>	[61]	"crayon"	"credentials"	"crosstalk"	"cTMed"
#>	[65]	"ctsem"	"curl"	"cyclocomp"	"data.table"
#>	[69]	"DBI"	"dbplyr"	"Deriv"	"desc"
#>	[73]	"deSolve"	"devtools"	"diagram"	"dials"
#>	[77]	"DiceDesign"	"diffobj"	"digest"	"distributional"
#>	[81]	"distro"	"doBy"	"docopt"	"doFuture"
#>	[85]	"downlit"	"dplyr"	"DT"	"dtplyr"
#>	[89]	"duckdb"	"dynr"	"dynUtils"	"ellipse"
#>	[93]	"ellipsis"	"evaluate"	"expm"	"fansi"
#>	[97]	"farver"	"fastDummies"	"fastmap"	"fclust"
#>	[101]	"fda"	"fdrtool"	"fds"	"FNN"
#>	[105]	"fontawesome"	"forcats"	"foreach"	"Formula"
#>	[109]	"fs"	"fst"	"fstcore"	"furrr"
#>	[113]	"future"	"future.apply"	"gargle"	"generics"
#>	[117]	"gert"	"ggplot2"	"ggrepel"	"gh"
#>	[121]	"gitcreds"	"glasso"	"glmnet"	"globals"
#>	[125]	"glue"	"googledrive"	"googlesheets4"	"gower"

#>	[129]	"GPfit"	"gridExtra"	"gsubfn"	"gtable"
#>	[133]	"gtools"	"hardhat"	"haven"	"hdrcde"
#>	[137]	"here"	"highr"	"Hmisc"	"hms"
#>	[141]	"htmlTable"	"htmltools"	"htmlwidgets"	"httpgd"
#>	[145]	"httpuv"	"httr"	"httr2"	"ids"
#>	[149]	"ifaTools"	"igraph"	"infer"	"ini"
#>	[153]	"inline"	"ipred"	"isoband"	"iterators"
#>	[157]	"jomo"	"jpeg"	"jquerylib"	"jsonlite"
#>	[161]	"jsonvalidate"	"kernlab"	"knitr"	"ks"
#>	[165]	"labeling"	"Lahman"	"languageserver"	"later"
#>	[169]	"latex2exp"	"lava"	"lavaan"	"lazyeval"
#>	[173]	"lhs"	"lifecycle"	"lintr"	"listenv"
#>	[177]	"littler"	"lme4"	"locfit"	"longMI"
#>	[181]	"loo"	"lubridate"	"magick"	"magrittr"
#>	[185]	"markdown"	"MatrixModels"	"matrixStats"	"mclust"
#>	[189]	"memoise"	"metaSEM"	"mice"	"microbenchmark"
#>		"mime"	"miniUI"	"minqa"	"mitml"
	[193]	"mime" "mize"	"miniUI" "mnormt"	"minqa" "modeldata"	"mitml" "modelenv"
#>	[193] [197]			"modeldata"	
#> #>	[193] [197] [201]	"mize"	"mnormt"	"modeldata"	"modelenv"
#> #> #>	[193] [197] [201] [205]	"mize" "modelr"	"mnormt" "MplusAutomation"	"modeldata" "multicool"	"modelenv" "munsell"
#> #> #>	[193] [197] [201] [205] [209]	"mize" "modelr" "mvtnorm"	"mnormt"  "MplusAutomation"  "nloptr"	"modeldata" "multicool" "numDeriv"	"modelenv" "munsell" "nycflights13"
#> #> #> #>	[193] [197] [201] [205] [209] [213]	"mize" "modelr" "mvtnorm" "OpenMx"	"mnormt"  "MplusAutomation"  "nloptr"  "openssl"  "parallelly"	"multicool" "numDeriv" "ordinal"	"modelenv" "munsell" "nycflights13" "pan"
#> #> #> #> #>	[193] [197] [201] [205] [209] [213] [217]	"mize" "modelr" "mvtnorm" "OpenMx" "pander"	"mnormt"  "MplusAutomation"  "nloptr"  "openssl"  "parallelly"	"modeldata" "multicool" "numDeriv" "ordinal" "parsnip"	"modelenv"  "munsell"  "nycflights13"  "pan"  "patchwork"
#> #> #> #> #>	[193] [197] [201] [205] [209] [213] [217] [221]	"mize" "modelr" "mvtnorm" "OpenMx" "pander" "pbapply"	"mnormt"  "MplusAutomation"  "nloptr"  "openssl"  "parallelly"  "pbivnorm"	"modeldata"  "multicool"  "numDeriv"  "ordinal"  "parsnip"  "pbkrtest"	"modelenv"  "munsell"  "nycflights13"  "pan"  "patchwork"  "pcaPP"
#> #> #> #> #> #>	[193] [197] [201] [205] [209] [213] [217] [221] [225]	"mize"  "modelr"  "mvtnorm"  "OpenMx"  "pander"  "pbapply"  "pdftools"	"mnormt"  "MplusAutomation"  "nloptr"  "openssl"  "parallelly"  "pbivnorm"  "pillar"	"modeldata"  "multicool"  "numDeriv"  "ordinal"  "parsnip"  "pbkrtest"  "pkgbuild"	"modelenv"  "munsell"  "nycflights13"  "pan"  "patchwork"  "pcaPP"  "pkgconfig"
#> #> #> #> #> #> #>	[193] [197] [201] [205] [209] [213] [217] [221] [225] [229]	"mize"  "modelr"  "mvtnorm"  "OpenMx"  "pander"  "pbapply"  "pdftools"  "pkgdown"	"mnormt"  "MplusAutomation"  "nloptr"  "openssl"  "parallelly"  "pbivnorm"  "pillar"  "pkgload"	"modeldata"  "multicool"  "numDeriv"  "ordinal"  "parsnip"  "pbkrtest"  "pkgbuild"  "plogr"	"modelenv"  "munsell"  "nycflights13"  "pan"  "patchwork"  "pcaPP"  "pkgconfig"  "plyr"

#>	[237]	"profvis"	"progress"	"progressr"	"promises"
#>	[241]	"proto"	"ps"	"psych"	"purrr"
#>	[245]	"qgraph"	"qpdf"	"quadprog"	"quantreg"
#>	[249]	"quarto"	"QuickJSR"	"R.cache"	"R.methodsS3"
#>	[253]	"R.00"	"R.utils"	"R6"	"ragg"
#>	[257]	"rainbow"	"rappdirs"	"rbibutils"	"rcmdcheck"
#>	[261]	"RColorBrewer"	"Rcpp"	"RcppArmadillo"	"RcppEigen"
#>	[265]	"RcppGSL"	"RcppParallel"	"RcppTOML"	"RCurl"
#>	[269]	"Rdpack"	"readr"	"readxl"	"recipes"
#>	[273]	"RefManageR"	"rematch"	"rematch2"	"remotes"
#>	[277]	"reprex"	"reshape2"	"reticulate"	"rex"
#>	[281]	"rhub"	"rlang"	"RMariaDB"	"rmarkdown"
#>	[285]	"roxygen2"	"rpf"	"RPostgres"	"rProject"
#>	[289]	"rprojroot"	"rsample"	"RSQLite"	"rstan"
#>	[293]	"rstantools"	"rstudioapi"	"rversions"	"rvest"
#>	[297]	"Ryacas"	"sass"	"scales"	"selectr"
#>	[301]	"semlbci"	"semmcci"	"sessioninfo"	"shape"
#>	[305]	"shiny"	"simStateSpace"	"slider"	"snow"
#>	[309]	"snowfall"	"sourcetools"	"SparseM"	"SQUAREM"
#>	[313]	"StanHeaders"	"statmod"	"stringi"	"stringr"
#>	[317]	"styler"	"symSEM"	"sys"	"systemfonts"
#>	[321]	"tensorA"	"testthat"	"texreg"	"textshaping"
#>	[325]	"tibble"	"tidymodels"	"tidyr"	"tidyselect"
#>	[329]	"tidyverse"	"timechange"	"timeDate"	"tinytex"
#>	[333]	"tune"	"tzdb"	"ucminf"	"unigd"
#>	[337]	"urlchecker"	"usethis"	"utf8"	"uuid"
#>	[341]	"V8"	"vctrs"	"viridis"	"viridisLite"

#>	[345]	"vroom"	"waldo"	"warp"	"whisker"
#>	[349]	"whoami"	"withr"	"workflows"	"workflowsets"
#>	[353]	"xfun"	"xm12"	"xmlparsedata"	"xopen"
#>	[357]	"xtable"	"yaml"	"yardstick"	"zip"
#>	[361]	"base"	"boot"	"class"	"cluster"
#>	[365]	"codetools"	"compiler"	"datasets"	"foreign"
#>	[369]	"graphics"	"grDevices"	"grid"	"KernSmooth"
#>	[373]	"lattice"	"MASS"	"Matrix"	"methods"
#>	[377]	"mgcv"	"nlme"	"nnet"	"parallel"
#>	[381]	"rpart"	"spatial"	"splines"	"stats"
#>	[385]	"stats4"	"survival"	"tcltk"	"tools"
#>	[389]	"utils"			

### References

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

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