## Session Info

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### Session

```
sessionInfo()
#> R version 4.4.1 (2024-06-14)
#> 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] rProject_0.0.14
#>
#> loaded via a namespace (and not attached):
#> [1] backports_1.5.0 R6_2.5.1
                                       lubridate_1.9.3 xfun_0.46
#> [5] magrittr_2.0.3 glue_1.7.0
                                        stringr_1.5.1 knitr_1.48
#> [9] timechange_0.3.0 generics_0.1.3
                                       lifecycle_1.0.4 xml2_1.3.6
#> [13] cli_3.6.3.9000 bibtex_0.5.1
                                        compiler_4.4.1 highr_0.11
#> [17] rprojroot_2.0.4 plyr_1.8.9
                                        httr_1.4.7
                                                        tools_4.4.1
#> [21] evaluate_0.24.0 Rcpp_1.0.13
                                        RefManageR_1.4.0 rlang_1.1.4
#> [25] jsonlite_1.8.8 stringi_1.8.4
```

## **Packages**

```
unname(installed.packages()[, 1])
     [1] "cffr"
                            "devtools"
                                               "gert"
#>
                                                                 "httr2"
     [5] "metaVAR"
                            "quarto"
                                               "Rcpp"
                                                                 "rProject"
     [9] "tinytex"
                            "xfun"
                                               "abind"
                                                                 "arrow"
#>
    [13] "ash"
                            "AsioHeaders"
                                               "askpass"
                                                                 "assertthat"
                                               "betaDelta"
    [17] "backports"
                            "base64enc"
                                                                 "betaMC"
#> [21] "betaNB"
                            "betaSandwich"
                                               "BH"
                                                                  "bibtex"
```

#>	[25]	"BiocManager"	"bit"	"bit64"	"bitops"
#>	[29]	"blob"	"brew"	"brio"	"broom"
#>	[33]	"bslib"	"cachem"	"callr"	"car"
#>	[37]	"caracas"	"carData"	"cellranger"	"cffr"
#>	[41]	"checkmate"	"cli"	"clipr"	"clock"
#>	[45]	"coda"	"cOde"	"collections"	"colorspace"
#>	[49]	"commonmark"	"conflicted"	"corpcor"	"covr"
#>	[53]	"cowplot"	"cpp11"	"crayon"	"credentials"
#>	[57]	"crosstalk"	"cTMed"	"ctsem"	"curl"
#>	[61]	"cyclocomp"	"data.table"	"DBI"	"dbplyr"
#>	[65]	"Deriv"	"desc"	"deSolve"	"devtools"
#>	[69]	"diagram"	"dials"	"DiceDesign"	"diffobj"
#>	[73]	"digest"	"distributional"	"distro"	"doBy"
#>	[77]	"docopt"	"doFuture"	"downlit"	"dplyr"
#>	[81]	"DT"	"dtplyr"	"duckdb"	"dynr"
#>	[85]	"dynUtils"	"ellipse"	"ellipsis"	"evaluate"
#>	[89]	"expm"	"fansi"	"farver"	"fastDummies"
#>	[93]	"fastmap"	"fclust"	"fda"	"fdrtool"
#>	[97]	"fds"	"fitCTVARMx"	"fitDTVARMx"	"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]	"GPArotation"	"GPfit"	"gridExtra"	"gsubfn"
#>	[129]	"gtable"	"gtools"	"hardhat"	"haven"

#>	[133]	"hdrcde"	"here"	"highr"	"Hmisc"
#>	[137]	"hms"	"htmlTable"	"htmltools"	"htmlwidgets"
#>	[141]	"httpgd"	"httpuv"	"httr"	"httr2"
#>	[145]	"ids"	"ifaTools"	"igraph"	"infer"
#>	[149]	"ini"	"inline"	"ipred"	"isoband"
#>	[153]	"iterators"	"jomo"	"jpeg"	"jquerylib"
#>	[157]	"jsonlite"	"jsonvalidate"	"kernlab"	"knitr"
#>	[161]	"ks"	"labeling"	"Lahman"	"languageserver"
#>	[165]	"later"	"latex2exp"	"lava"	"lavaan"
#>	[169]	"lazyeval"	"lhs"	"lifecycle"	"lintr"
#>	[173]	"listenv"	"littler"	"lme4"	"locfit"
#>	[177]	"longMI"	"loo"	"lubridate"	"magick"
#>	[181]	"magrittr"	"markdown"	"MatrixModels"	"matrixStats"
#>	[185]	"mclust"	"memoise"	"metaSEM"	"metaVAR"
#>	[189]	"mice"	"microbenchmark"	"mime"	"miniUI"
		"mice" "minqa"	"microbenchmark" "mitml"	"mime" "mize"	"miniUI" "mnormt"
#>	[193]				
#> #>	[193] [197]	"minqa"	"mitml"	"mize"	"mnormt"
#> #> #>	[193] [197] [201]	"minqa" "modeldata"	"mitml" "modelenv"	"mize" "modelr"	"mnormt" "MplusAutomation"
#> #> #>	[193] [197] [201] [205]	"minqa" "modeldata" "multicool"	"mitml" "modelenv" "munsell"	"mize" "modelr" "mvtnorm"	"mnormt"  "MplusAutomation"  "nloptr"
#> #> #> #>	[193] [197] [201] [205] [209]	"minqa" "modeldata" "multicool" "numDeriv"	"mitml" "modelenv" "munsell" "nycflights13"	<pre>"mize" "modelr" "mvtnorm" "OpenMx"</pre>	"mnormt"  "MplusAutomation"  "nloptr"  "openssl"
#> #> #> #> #>	[193] [197] [201] [205] [209] [213]	"minqa" "modeldata" "multicool" "numDeriv" "ordinal"	"mitml" "modelenv" "munsell" "nycflights13" "pan"	"mize" "modelr" "mvtnorm" "OpenMx" "pander"	"mnormt"  "MplusAutomation"  "nloptr"  "openssl"  "parallelly"
#> #> #> #> #>	[193] [197] [201] [205] [209] [213] [217]	"minqa" "modeldata" "multicool" "numDeriv" "ordinal" "parsnip"	"mitml" "modelenv" "munsell" "nycflights13" "pan" "patchwork"	"mize"  "modelr"  "mvtnorm"  "OpenMx"  "pander"  "pbapply"	"mnormt"  "MplusAutomation"  "nloptr"  "openssl"  "parallelly"  "pbivnorm"
#> #> #> #> #> #>	[193] [197] [201] [205] [209] [213] [217] [221]	"minqa" "modeldata" "multicool" "numDeriv" "ordinal" "parsnip" "pbkrtest"	"mitml" "modelenv" "munsell" "nycflights13" "pan" "patchwork" "pcaPP"	"mize"  "modelr"  "mvtnorm"  "OpenMx"  "pander"  "pbapply"  "pdftools"	"mnormt"  "MplusAutomation"  "nloptr"  "openssl"  "parallelly"  "pbivnorm"  "pillar"
#> #> #> #> #> #>	[193] [197] [201] [205] [209] [213] [217] [221] [225]	"minqa" "modeldata" "multicool" "numDeriv" "ordinal" "parsnip" "pbkrtest" "pkgbuild"	"mitml" "modelenv" "munsell" "nycflights13" "pan" "patchwork" "pcaPP" "pkgconfig"	"mize"  "modelr"  "mvtnorm"  "OpenMx"  "pander"  "pbapply"  "pdftools"  "pkgdown"	"mnormt"  "MplusAutomation"  "nloptr"  "openssl"  "parallelly"  "pbivnorm"  "pillar"  "pkgload"
#> #> #> #> #> #> #> #> #>	[193] [197] [201] [205] [209] [213] [217] [221] [225] [229]	"minqa"  "modeldata"  "multicool"  "numDeriv"  "ordinal"  "parsnip"  "pbkrtest"  "pkgbuild"  "plogr"	"mitml" "modelenv" "munsell" "nycflights13" "pan" "patchwork" "pcaPP" "pkgconfig" "plyr"	"mize"  "modelr"  "mvtnorm"  "OpenMx"  "pander"  "pbapply"  "pdftools"  "pkgdown"  "png"	"mnormt"  "MplusAutomation"  "nloptr"  "openssl"  "parallelly"  "pbivnorm"  "pillar"  "pkgload"  "posterior"
#> #> #> #> #> #> #> #> #>	[193] [197] [201] [205] [209] [213] [217] [221] [225] [229] [233]	"minqa" "modeldata" "multicool" "numDeriv" "ordinal" "parsnip" "pbkrtest" "pkgbuild" "plogr" "pracma"	"mitml" "modelenv" "munsell" "nycflights13" "pan" "patchwork" "pcaPP" "pkgconfig" "plyr" "praise"	"mize"  "modelr"  "mvtnorm"  "OpenMx"  "pander"  "pbapply"  "pdftools"  "pkgdown"  "png"  "prettyunits"	"mnormt"  "MplusAutomation"  "nloptr"  "openssl"  "parallelly"  "pbivnorm"  "pillar"  "pkgload"  "posterior"  "printr"

#>	[241]	"psych"	"purrr"	"qgraph"	"qpdf"
#>	[245]	"quadprog"	"quantreg"	"quarto"	"QuickJSR"
#>	[249]	"R.cache"	"R.methodsS3"	"R.00"	"R.utils"
#>	[253]	"R6"	"ragg"	"rainbow"	"rappdirs"
#>	[257]	"rbibutils"	"rcmdcheck"	"RColorBrewer"	"Rcpp"
#>	[261]	"RcppArmadillo"	"RcppEigen"	"RcppGSL"	"RcppParallel"
#>	[265]	"RcppTOML"	"RCurl"	"Rdpack"	"readr"
#>	[269]	"readxl"	"recipes"	"RefManageR"	"rematch"
#>	[273]	"rematch2"	"remotes"	"reprex"	"reshape2"
#>	[277]	"reticulate"	"rex"	"rhub"	"rlang"
#>	[281]	"RMariaDB"	"rmarkdown"	"roxygen2"	"rpf"
#>	[285]	"RPostgres"	"rProject"	"rprojroot"	"rsample"
#>	[289]	"RSQLite"	"rstan"	"rstantools"	"rstudioapi"
#>	[293]	"rversions"	"rvest"	"Ryacas"	"sass"
#>	[297]	"scales"	"selectr"	"semlbci"	"semmcci"
#>	[301]	"sessioninfo"	"shape"	"shiny"	"simStateSpace"
#>	[305]	"slider"	"snow"	"snowfall"	"sourcetools"
#>	[309]	"SparseM"	"SQUAREM"	"StanHeaders"	"statmod"
#>	[313]	"stringi"	"stringr"	"styler"	"symSEM"
#>	[317]	"sys"	"systemfonts"	"tensorA"	"testthat"
#>	[321]	"texreg"	"textshaping"	"tibble"	"tidymodels"
#>	[325]	"tidyr"	"tidyselect"	"tidyverse"	"timechange"
#>	[329]	"timeDate"	"tinytex"	"tune"	"tzdb"
#>	[333]	"ucminf"	"unigd"	"urlchecker"	"usethis"
#>	[337]	"utf8"	"uuid"	"V8"	"vctrs"
#>	[341]	"viridis"	"viridisLite"	"vroom"	"waldo"
#>	[345]	"warp"	"whisker"	"whoami"	"withr"

#>	[349]	"workflows"	"workflowsets"	"xfun"	"xml2"
#>	[353]	"xmlparsedata"	"xopen"	"xtable"	"yaml"
#>	[357]	"yardstick"	"zip"	"base"	"boot"
#>	[361]	"class"	"cluster"	"codetools"	"compiler"
#>	[365]	"datasets"	"foreign"	"graphics"	"grDevices"
#>	[369]	"grid"	"KernSmooth"	"lattice"	"MASS"
#>	[373]	"Matrix"	"methods"	"mgcv"	"nlme"
#>	[377]	"nnet"	"parallel"	"rpart"	"spatial"
#>	[381]	"splines"	"stats"	"stats4"	"survival"
#>	[385]	"tcltk"	"tools"	"utils"	

# References

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