Session Info

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Session

```
sessionInfo()

#> R version 4.5.0 (2025-04-11)
#> Platform: x86_64-pc-linux-gnu
#> Running under: Ubuntu 24.04.2 LTS
#>
#> Matrix products: default
#> BLAS:   /usr/lib/x86_64-linux-gnu/openblas-pthread/libblas.so.3
#> LAPACK: /usr/lib/x86_64-linux-gnu/openblas-pthread/libopenblasp-r0.3.26.so;  LAPACK version 3.12.
#>
#> 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_0.0.18
#>
#> loaded via a namespace (and not attached):
#>  [1] backports_1.5.0  R6_2.6.1         lubridate_1.9.4  xfun_0.52
#>  [5] magrittr_2.0.3   glue_1.8.0       stringr_1.5.1    knitr_1.50
#>  [9] timechange_0.3.0 generics_0.1.3   lifecycle_1.0.4  xml2_1.3.8
#> [13] cli_3.6.5.9000   bibtex_0.5.1     compiler_4.5.0   highr_0.11
#> [17] rprojroot_2.0.4  plyr_1.8.9       httr_1.4.7       tools_4.5.0
#> [21] evaluate_1.0.3   Rcpp_1.0.14      RefManageR_1.4.0 rlang_1.1.6
#> [25] jsonlite_2.0.0   stringi_1.8.7
```

Packages

```
unname(installed.packages()[, 1])

#>   [1] "metaVAR"        "abind"          "Amelia"
#>   [4] "arm"            "arrow"          "ash"
#>   [7] "askpass"        "assertthat"     "backports"
#>  [10] "base64enc"      "betaDelta"      "betaMC"
#>  [13] "betaNB"         "betaSandwich"   "BH"
#>  [16] "bibtex"         "BiocManager"    "bit"
```

```
#>  [19] "bit64"             "bitops"              "blob"
#>  [22] "bootStateSpace"    "brew"                "brio"
#>  [25] "broom"             "bslib"               "cachem"
#>  [28] "callr"             "car"                 "caracas"
#>  [31] "carData"           "cellranger"          "cffr"
#>  [34] "checkmate"         "cli"                 "clipr"
#>  [37] "clock"             "clusterGeneration"   "coda"
#>  [40] "cOde"              "collections"         "colorspace"
#>  [43] "commonmark"        "conflicted"          "corpcor"
#>  [46] "covr"              "cowplot"             "cpp11"
#>  [49] "crayon"            "credentials"         "crosstalk"
#>  [52] "cTMed"             "ctsem"               "curl"
#>  [55] "data.table"        "DBI"                 "dbplyr"
#>  [58] "Deriv"             "desc"                "deSolve"
#>  [61] "devtools"          "diagram"             "dials"
#>  [64] "DiceDesign"        "diffobj"             "digest"
#>  [67] "distributional"    "distro"              "doBy"
#>  [70] "docopt"            "doFuture"            "downlit"
#>  [73] "dplyr"             "DT"                  "dtplyr"
#>  [76] "duckdb"            "dynr"                "dynUtils"
#>  [79] "ellipse"           "ellipsis"            "evaluate"
#>  [82] "expm"              "fansi"               "farver"
#>  [85] "fastDummies"       "fastmap"             "fclust"
#>  [88] "fda"               "fdrtool"             "fds"
#>  [91] "fitCTVARMx"        "fitDTVARMx"          "FNN"
#>  [94] "fontawesome"       "forcats"             "foreach"
#>  [97] "Formula"           "fs"                  "fst"
```

```
#> [100] "fstcore"          "furrr"             "future"
#> [103] "future.apply"      "gargle"            "generics"
#> [106] "gert"              "ggplot2"           "ggrepel"
#> [109] "gh"                "gitcreds"          "glasso"
#> [112] "glmnet"            "globals"           "glue"
#> [115] "googledrive"       "googlesheets4"     "gower"
#> [118] "GPArotation"       "GPfit"             "graphicalVAR"
#> [121] "gridExtra"         "gsubfn"            "gtable"
#> [124] "gtools"            "hardhat"           "haven"
#> [127] "hdrcde"            "here"              "highr"
#> [130] "Hmisc"             "hms"               "htmlTable"
#> [133] "htmltools"         "htmlwidgets"       "httpuv"
#> [136] "httr"              "httr2"             "ids"
#> [139] "ifaTools"          "igraph"            "infer"
#> [142] "ini"               "inline"            "ipred"
#> [145] "isoband"           "iterators"         "jomo"
#> [148] "jpeg"              "jquerylib"         "jsonlite"
#> [151] "jsonvalidate"      "kernlab"           "knitr"
#> [154] "ks"                "labeling"          "Lahman"
#> [157] "languageserver"    "later"             "latex2exp"
#> [160] "lava"              "lavaan"            "lazyeval"
#> [163] "lhs"               "lifecycle"         "lintr"
#> [166] "listenv"           "litedown"          "littler"
#> [169] "lme4"              "locfit"            "longMI"
#> [172] "loo"               "lubridate"         "magick"
#> [175] "magrittr"          "markdown"          "MatrixModels"
#> [178] "matrixStats"       "mclust"            "memoise"
```

```
#> [181] "metaSEM"          "metaVAR"          "mice"
#> [184] "microbenchmark"   "mime"             "miniUI"
#> [187] "minqa"            "mitml"            "mize"
#> [190] "mlVAR"            "mnormt"           "modeldata"
#> [193] "modelenv"         "modelr"           "MplusAutomation"
#> [196] "multicool"        "munsell"          "mvtnorm"
#> [199] "nloptr"           "numDeriv"         "nycflights13"
#> [202] "OpenMx"           "openssl"          "ordinal"
#> [205] "pan"              "pander"           "parallelly"
#> [208] "parsnip"          "patchwork"        "pbapply"
#> [211] "pbivnorm"         "pbkrtest"         "pcaPP"
#> [214] "pdftools"         "pillar"           "pkgbuild"
#> [217] "pkgconfig"        "pkgdown"          "pkgload"
#> [220] "plogr"            "plyr"             "png"
#> [223] "posterior"        "pracma"           "praise"
#> [226] "prettyunits"      "printr"           "processx"
#> [229] "prodlim"          "profvis"          "progress"
#> [232] "progressr"        "promises"         "proto"
#> [235] "ps"               "psych"            "purrr"
#> [238] "qgraph"           "qpdf"             "quadprog"
#> [241] "quantreg"         "quarto"           "QuickJSR"
#> [244] "R.cache"          "R.methodsS3"      "R.oo"
#> [247] "R.utils"          "R6"               "ragg"
#> [250] "rainbow"          "rappdirs"         "rbibutils"
#> [253] "rcmdcheck"        "RColorBrewer"     "Rcpp"
#> [256] "RcppArmadillo"    "RcppEigen"        "RcppGSL"
#> [259] "RcppParallel"     "RcppTOML"         "RCurl"
```

```
#> [262] "Rdpack"        "readr"          "readxl"
#> [265] "recipes"       "RefManageR"     "reformulas"
#> [268] "rematch"       "rematch2"       "remotes"
#> [271] "reprex"        "reshape2"       "reticulate"
#> [274] "rex"           "rhub"           "rjags"
#> [277] "rlang"         "RMariaDB"       "rmarkdown"
#> [280] "roxygen2"      "rpf"            "RPostgres"
#> [283] "rProject"      "rprojroot"      "rsample"
#> [286] "RSQLite"       "rstan"          "rstantools"
#> [289] "rstudioapi"    "rversions"      "rvest"
#> [292] "Ryacas"        "sass"           "scales"
#> [295] "selectr"       "semlbci"        "semmcci"
#> [298] "sessioninfo"   "sfd"            "shape"
#> [301] "shiny"         "simStateSpace"  "slider"
#> [304] "snow"          "snowfall"       "sourcetools"
#> [307] "SparseM"       "sparsevctrs"    "SQUAREM"
#> [310] "StanHeaders"   "statmod"        "stringi"
#> [313] "stringr"       "styler"         "symSEM"
#> [316] "sys"           "systemfonts"    "tensorA"
#> [319] "testthat"      "texreg"         "textshaping"
#> [322] "tibble"        "tidymodels"     "tidyr"
#> [325] "tidyselect"    "tidyverse"      "timechange"
#> [328] "timeDate"      "tinytex"        "tune"
#> [331] "tzdb"          "ucminf"         "urlchecker"
#> [334] "usethis"       "utf8"           "uuid"
#> [337] "V8"            "vctrs"          "viridis"
#> [340] "viridisLite"   "vroom"          "waldo"
```

```
#> [343] "warp"          "whisker"       "whoami"
#> [346] "withr"         "workflows"     "workflowsets"
#> [349] "xfun"          "xml2"          "xmlparsedata"
#> [352] "xopen"         "xtable"        "yaml"
#> [355] "yardstick"     "zip"           "base"
#> [358] "boot"          "class"         "cluster"
#> [361] "codetools"     "compiler"      "datasets"
#> [364] "foreign"       "graphics"      "grDevices"
#> [367] "grid"          "KernSmooth"    "lattice"
#> [370] "MASS"          "Matrix"        "methods"
#> [373] "mgcv"          "nlme"          "nnet"
#> [376] "parallel"      "rpart"         "spatial"
#> [379] "splines"       "stats"         "stats4"
#> [382] "survival"      "tcltk"         "tools"
#> [385] "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/