Session Info

Ivan Jacob Agaloos Pesigan

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_0.0.13
#>
#> loaded via a namespace (and not attached):
#> [1] backports_1.5.0 R6_2.5.1
                                       lubridate_1.9.3 xfun_0.45
#> [5] magrittr_2.0.3 glue_1.7.0
                                        stringr_1.5.1 knitr_1.47
#> [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_1.0.12
                                        RefManageR_1.4.0 rlang_1.1.4
#> [25] jsonlite_1.8.8 stringi_1.8.4
```

Packages

```
unname(installed.packages()[, 1])
     [1] "fitCTVARMx"
                            "metaVAR"
                                              "abind"
#>
                                                                 "arrow"
#>
    [5] "ash"
                            "AsioHeaders"
                                              "askpass"
                                                                 "assertthat"
     [9] "backports"
                            "base64enc"
                                              "betaDelta"
                                                                 "betaMC"
#>
    [13] "betaNB"
                            "betaSandwich"
                                              "BH"
                                                                 "bibtex"
    [17] "BiocManager"
                            "bit"
                                              "bit64"
                                                                 "bitops"
#> [21] "blob"
                            "brew"
                                              "brio"
                                                                 "broom"
```

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

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

#>	[241]	"R.methodsS3"	"R.00"	"R.utils"	"R6"
#>	[245]	"ragg"	"rainbow"	"rappdirs"	"rbibutils"
#>	[249]	"rcmdcheck"	"RColorBrewer"	"Rcpp"	"RcppArmadillo"
#>	[253]	"RcppEigen"	"RcppGSL"	"RcppParallel"	"RcppTOML"
#>	[257]	"RCurl"	"Rdpack"	"readr"	"readxl"
#>	[261]	"recipes"	"RefManageR"	"rematch"	"rematch2"
#>	[265]	"remotes"	"reprex"	"reshape2"	"reticulate"
#>	[269]	"rex"	"rhub"	"rlang"	"RMariaDB"
#>	[273]	"rmarkdown"	"roxygen2"	"rpf"	"RPostgres"
#>	[277]	"rProject"	"rprojroot"	"rsample"	"RSQLite"
#>	[281]	"rstan"	"rstantools"	"rstudioapi"	"rversions"
#>	[285]	"rvest"	"Ryacas"	"sass"	"scales"
#>	[289]	"selectr"	"semlbci"	"semmcci"	"sessioninfo"
#>	[293]	"shape"	"shiny"	"simStateSpace"	"slider"
#>	[297]	"snow"	"snowfall"	"sourcetools"	"SparseM"
#>	[301]	"SQUAREM"	"StanHeaders"	"statmod"	"stringi"
#>	[305]	"stringr"	"styler"	"symSEM"	"sys"
#>	[309]	"systemfonts"	"tensorA"	"testthat"	"texreg"
#>	[313]	"textshaping"	"tibble"	"tidymodels"	"tidyr"
#>	[317]	"tidyselect"	"tidyverse"	"timechange"	"timeDate"
#>	[321]	"tinytex"	"tune"	"tzdb"	"ucminf"
#>	[325]	"unigd"	"urlchecker"	"usethis"	"utf8"
#>	[329]	"uuid"	"V8"	"vctrs"	"viridis"
#>	[333]	"viridisLite"	"vroom"	"waldo"	"warp"
#>	[337]	"whisker"	"whoami"	"withr"	"workflows"
#>	[341]	"workflowsets"	"xfun"	"xm12"	"xmlparsedata"
#>	[345]	"xopen"	"xtable"	"yaml"	"yardstick"

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