### 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 22.04.5 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-r0.3.20.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:
base
#> other attached packages:
#> [1] rProject_0.0.14
#>
#> loaded via a namespace (and not attached):
                                lubridate_1.9.4 xfun_0.49
#> [1] backports_1.5.0 R6_2.5.1
#> [5] magrittr_2.0.3 glue_1.8.0 stringr_1.5.1 knitr_1.49
#> [9] timechange_0.3.0 generics_0.1.3 lifecycle_1.0.4 xml2_1.3.6
                                  1 compiler_4.4.1 highr_0.11 httr_1.4.7 tools_4.4.
#> [13] cli_3.6.3.9001 bibtex_0.5.1
#> [17] rprojroot_2.0.4 plyr_1.8.9
                                                     tools_4.4.1
#> [21] evaluate_1.0.1 Rcpp_1.0.13-1 RefManageR_1.4.0 rlang_1.1.4
```

## **Packages**

```
unname(installed.packages()[, 1])
     [1] "simStateSpace"
#>
                             "abind"
                                                 "arm"
     [4] "arrow"
                             "ash"
#>
                                                 "AsioHeaders"
    [7] "askpass"
                             "assertthat"
                                                 "backports"
#>
#> [10] "base64enc"
                             "betaDelta"
                                                 "betaMC"
                             "betaSandwich"
                                                 "BH"
#> [13] "betaNB"
#> [16] "bibtex"
                                                 "bit"
                             "BiocManager"
                             "bitops"
                                                 "blob"
#> [19] "bit64"
#> [22] "brew"
                             "brio"
                                                 "broom"
#> [25] "bslib"
                             "cachem"
                                                 "callr"
#> [28] "car"
                             "caracas"
                                                 "carData"
#> [31] "cellranger"
                             "cffr"
                                                 "checkmate"
                             "clipr"
#> [34] "cli"
                                                 "clock"
#> [37] "clusterGeneration" "coda"
                                                 "cOde"
#> [40] "collections"
                             "colorspace"
                                                 "commonmark"
#> [43] "conflicted"
                             "corpcor"
                                                 "covr"
#> [46] "cowplot"
                             "cpp11"
                                                 "crayon"
#> [49] "credentials"
                             "crosstalk"
                                                 "cTMed"
#> [52] "ctsem"
                             "curl"
                                                 "cyclocomp"
#> [55] "data.table"
                             "DBI"
                                                 "dbplyr"
#> [58] "Deriv"
                             "desc"
                                                 "deSolve"
#> [61] "devtools"
                             "diagram"
                                                 "dials"
#> [64] "DiceDesign"
                                                 "digest"
                             "diffobj"
                                                 "doBy"
#> [67] "distributional"
                             "distro"
#> [70] "docopt"
                             "doFuture"
                                                 "downlit"
#> [73] "dplyr"
                             "DT"
                                                 "dtplyr"
#> [76] "duckdb"
                             "dynr"
                                                 "dynUtils"
#> [79] "ellipse"
                             "ellipsis"
                                                 "evaluate"
                             "fansi"
#> [82] "expm"
                                                 "farver"
#> [85] "fastDummies"
                                                 "fclust"
                             "fastmap"
#> [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"
                                                 "glasso"
                             "gitcreds"
```

```
#> [112] "glmnet"
                              "globals"
                                                   "glue"
#> [115] "googledrive"
                              "googlesheets4"
                                                   "gower"
#> [118] "GPArotation"
                              "GPfit"
                                                   "graphicalVAR"
#> [121] "gridExtra"
                                                   "gtable"
                              "gsubfn"
#> [124] "gtools"
                              "hardhat"
                                                   "haven"
#> [127] "hdrcde"
                              "here"
                                                   "highr"
#> [130] "Hmisc"
                              "hms"
                                                   "htmlTable"
#> [133] "htmltools"
                              "htmlwidgets"
                                                   "httpgd"
#> [136] "httpuv"
                              "httr"
                                                   "httr2"
#> [139] "ids"
                              "ifaTools"
                                                   "igraph"
#> [142] "infer"
                              "ini"
                                                   "inline"
#> [145] "ipred"
                              "isoband"
                                                   "iterators"
#> [148] "jomo"
                              "jpeg"
                                                   "jquerylib"
#> [151] "jsonlite"
                              "jsonvalidate"
                                                   "kernlab"
#> [154] "knitr"
                              "ks"
                                                   "labeling"
#> [157] "Lahman"
                              "languageserver"
                                                   "later"
#> [160] "latex2exp"
                              "lava"
                                                   "lavaan"
#> [163] "lazyeval"
                              "lhs"
                                                   "lifecycle"
#> [166] "lintr"
                              "listenv"
                                                   "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] "minga"
                              "mitml"
                                                   "mize"
#> [190] "mlVAR"
                              "mnormt"
                                                   "modeldata"
                                                   "MplusAutomation"
#> [193] "modelenv"
                              "modelr"
#> [196] "multicool"
                              "munsell"
                                                   "mvtnorm"
#> [199] "nloptr"
                              "numDeriv"
                                                   "nycflights13"
#> [202] "OpenMx"
                              "openssl"
                                                   "ordinal"
                              "pander"
#> [205] "pan"
                                                   "parallelly"
#> [208] "parsnip"
                                                   "pbapply"
                              "patchwork"
#> [211] "pbivnorm"
                                                   "pcaPP"
                              "pbkrtest"
#> [214] "pdftools"
                              "pillar"
                                                   "pkgbuild"
#> [217] "pkgconfig"
                              "pkgdown"
                                                   "pkgload"
#> [220] "plogr"
                                                   "png"
                              "plyr"
#> [223] "posterior"
                              "pracma"
                                                   "praise"
#> [226] "prettyunits"
                              "printr"
                                                   "processx"
#> [229] "prodlim"
                              "profvis"
                                                   "progress"
#> [232] "progressr"
                              "promises"
                                                   "proto"
#> [235] "ps"
                              "psych"
                                                   "purrr"
#> [238] "qgraph"
                              "qpdf"
                                                   "quadprog"
                              "quarto"
                                                   "QuickJSR"
#> [241] "quantreg"
#> [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"
                                                    "rematch"
#> [268] "rematch2"
                              "remotes"
                                                    "reprex"
#> [271] "reshape2"
                              "reticulate"
                                                   "rex"
#> [274] "rhub"
                              "rjags"
                                                   "rlang"
#> [277] "RMariaDB"
                               "rmarkdown"
                                                    "roxygen2"
#> [280] "rpf"
                               "RPostgres"
                                                   "rProject"
#> [283] "rprojroot"
                              "rsample"
                                                   "RSQLite"
#> [286] "rstan"
                               "rstantools"
                                                   "rstudioapi"
#> [289] "rversions"
                              "rvest"
                                                   "Ryacas"
#> [292] "sass"
                               "scales"
                                                   "selectr"
#> [295] "semlbci"
                              "semmcci"
                                                   "sessioninfo"
#> [298] "sfd"
                              "shape"
                                                   "shiny"
#> [301] "simStateSpace"
                              "slider"
                                                   "snow"
#> [304] "snowfall"
                               "sourcetools"
                                                   "SparseM"
#> [307] "SQUAREM"
                              "StanHeaders"
                                                   "statmod"
#> [310] "stringi"
                              "stringr"
                                                   "styler"
#> [313] "symSEM"
                              "sys"
                                                   "systemfonts"
#> [316] "tensorA"
                              "testthat"
                                                   "texreg"
#> [319] "textshaping"
                              "tibble"
                                                   "tidymodels"
#> [322] "tidyr"
                               "tidyselect"
                                                    "tidyverse"
#> [325] "timechange"
                              "timeDate"
                                                    "tinytex"
#> [328] "tune"
                              "tzdb"
                                                    "ucminf"
#> [331] "unigd"
                              "urlchecker"
                                                   "usethis"
#> [334] "utf8"
                              "uuid"
                                                   "V8"
#> [337] "vctrs"
                               "viridis"
                                                    "viridisLite"
                                                   "warp"
#> [340] "vroom"
                              "waldo"
#> [343] "whisker"
                              "whoami"
                                                   "withr"
#> [346] "workflows"
                              "workflowsets"
                                                    "xfun"
#> [349] "xm12"
                               "xmlparsedata"
                                                    "xopen"
#> [352] "xtable"
                              "yaml"
                                                   "yardstick"
#> [355] "zip"
                              "base"
                                                   "boot"
#> [358] "class"
                                                    "codetools"
                              "cluster"
#> [361] "compiler"
                              "datasets"
                                                   "foreign"
#> [364] "graphics"
                              "grDevices"
                                                   "grid"
#> [367] "KernSmooth"
                              "lattice"
                                                   "MASS"
#> [370] "Matrix"
                               "methods"
                                                    "mgcv"
#> [373] "nlme"
                              "nnet"
                                                    "parallel"
                              "spatial"
#> [376] "rpart"
                                                   "splines"
#> [379] "stats"
                               "stats4"
                                                   "survival"
```

#> [382] "tcltk" "tools" "utils"

# References

R Core Team. (2024). R: A language and environment for statistical computing. R Foundation for Statistical Computing. Vienna, Austria. https://www.R-project.org/