

# A Machine Profile Summary

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## Providing a characterization of a particular computing environment for R calculations

If we want to compare results computed on different machines, we need a way to provide measures and identifiers of the particular computing environment at hand. This document attempts to summarize some possibilities available in the R statistical software and language.

## Some possible information desired

There are multiple ways to get information of the type useful for characterizing the computing infrastructure used for a particular test or timing. We will need to ensure that identifiers of particular pieces of information are unique, and that common identifiers really do specify identical information. Otherwise, we need to develop new names for our set of information.

### Temporal information

Most computations should have a time/date stamp that is unlikely to be confused with any other, at least in combination with a machine name and/or other tags.

?? timestamp

### Identifier for the computing environment

- machine name
- operating system and version
- compiler or interpreter version
- specific variations, if any, that should be noted

### Hardware information

- cpu
- cores
- operating cycle speed??
- RAM total
- RAM available, possibly indicating swap space and usage
- RAM speed (could be variable)

### Software information

?? what to put in.

## R tools for machine information

### sessionInfo()

```
si <- sessionInfo()
si <- as.vector(si)
si

## R version 4.1.0 (2021-05-18)
## Platform: x86_64-linux-gnu (64-bit)
## Running under: Linux Mint 20.1
##
## Matrix products: default
## BLAS:   /usr/lib/x86_64-linux-gnu/openblas-pthread/libblas.so.3
## LAPACK: /usr/lib/x86_64-linux-gnu/openblas-pthread/liblapack.so.3
##
## locale:
##  [1] LC_CTYPE=en_CA.UTF-8      LC_NUMERIC=C
##  [3] LC_TIME=en_CA.UTF-8      LC_COLLATE=en_CA.UTF-8
##  [5] LC_MONETARY=en_CA.UTF-8  LC_MESSAGES=en_CA.UTF-8
##  [7] LC_PAPER=en_CA.UTF-8     LC_NAME=C
##  [9] LC_ADDRESS=C             LC_TELEPHONE=C
## [11] LC_MEASUREMENT=en_CA.UTF-8 LC_IDENTIFICATION=C
##
## attached base packages:
## [1] stats      graphics  grDevices  utils      datasets  methods   base
##
## loaded via a namespace (and not attached):
##  [1] compiler_4.1.0    magrittr_2.0.1    tools_4.1.0      htmltools_0.5.1.1
##  [5] yaml_2.2.1        stringi_1.6.2     rmarkdown_2.8    knitr_1.33
##  [9] stringr_1.4.0     xfun_0.23         digest_0.6.27    rlang_0.4.11
## [13] evaluate_0.14
```

### benchmarkme

- uses `proc.time()` for timings
- has single core and parallel timings
- ?? does it do GPUs
- provides far too much for most needs i.e., a succinct summary of how capable a computing system should be

```
library(benchmarkmeData)
library(benchmarkme)
ls(package:benchmarkmeData)
```

```
## Warning in ls(package:benchmarkmeData): 'package:benchmarkmeData' converted to
## character string
```

```
## [1] "get_datatable_past" "is_blas_optimize"  "make_data_set"
## [4] "move_files"         "past_results"      "past_results_v2"
## [7] "plot_past"          "select_results"    "summarise_results"
```

```
ls(package:benchmarkme)
```

```
## Warning in ls(package:benchmarkme): 'package:benchmarkme' converted to character
## string
```

```
## [1] "benchmark_io"          "benchmark_matrix_cal"
```

```
## [3] "benchmark_matrix_fun"      "benchmark_prog"
## [5] "benchmark_std"             "bm_matrix_cal_cross_product"
## [7] "bm_matrix_cal_lm"          "bm_matrix_cal_manip"
## [9] "bm_matrix_cal_power"       "bm_matrix_cal_sort"
## [11] "bm_matrix_fun_cholesky"    "bm_matrix_fun_determinant"
## [13] "bm_matrix_fun_eigen"       "bm_matrix_fun_fft"
## [15] "bm_matrix_fun_inverse"     "bm_parallel"
## [17] "bm_prog_escoufier"         "bm_prog_fib"
## [19] "bm_prog_gcd"               "bm_prog_hilbert"
## [21] "bm_prog_toeplitz"          "bm_read"
## [23] "bm_write"                   "create_bundle"
## [25] "get_available_benchmarks"  "get_byte_compiler"
## [27] "get_cpu"                     "get_linear_algebra"
## [29] "get_platform_info"         "get_r_version"
## [31] "get_ram"                     "get_sys_details"
## [33] "is_blas_optimize"          "plot_past"
## [35] "rank_results"              "sample_results"
## [37] "upload_results"
```

```
lsf.str("package:benchmarkme")
```

```
## benchmark_io : function (runs = 3, size = c(5, 50), tmpdir = tempdir(), verbose = TRUE,
##     cores = 0L)
## benchmark_matrix_cal : function (runs = 3, verbose = TRUE, cores = 0L)
## benchmark_matrix_fun : function (runs = 3, verbose = TRUE, cores = 0L)
## benchmark_prog : function (runs = 3, verbose = TRUE, cores = 0L)
## benchmark_std : function (runs = 3, verbose = TRUE, cores = 0L)
## bm_matrix_cal_cross_product : function (runs = 3, verbose = TRUE)
## bm_matrix_cal_lm : function (runs = 3, verbose = TRUE)
## bm_matrix_cal_manip : function (runs = 3, verbose = TRUE)
## bm_matrix_cal_power : function (runs = 3, verbose = TRUE)
## bm_matrix_cal_sort : function (runs = 3, verbose = TRUE)
## bm_matrix_fun_cholesky : function (runs = 3, verbose = TRUE)
## bm_matrix_fun_determinant : function (runs = 3, verbose = TRUE)
## bm_matrix_fun_eigen : function (runs = 3, verbose = TRUE)
## bm_matrix_fun_fft : function (runs = 3, verbose = TRUE)
## bm_matrix_fun_inverse : function (runs = 3, verbose = TRUE)
## bm_parallel : function (bm, runs, verbose, cores, ...)
## bm_prog_escoufier : function (runs = 3, verbose = TRUE)
## bm_prog_fib : function (runs = 3, verbose = TRUE)
## bm_prog_gcd : function (runs = 3, verbose = TRUE)
## bm_prog_hilbert : function (runs = 3, verbose = TRUE)
## bm_prog_toeplitz : function (runs = 3, verbose = TRUE)
## bm_read : function (runs = 3, size = c(5, 50), tmpdir = tempdir(), verbose = TRUE)
## bm_write : function (runs = 3, size = c(5, 50), tmpdir = tempdir(), verbose = TRUE)
## create_bundle : function (results, filename = NULL, args = NULL, id_prefix = "")
## get_available_benchmarks : function ()
## get_byte_compiler : function ()
## get_cpu : function ()
## get_linear_algebra : function ()
## get_platform_info : function ()
## get_r_version : function ()
## get_ram : function ()
## get_sys_details : function (sys_info = TRUE, platform_info = TRUE, r_version = TRUE, ram = TRUE,
##     cpu = TRUE, byte_compiler = TRUE, linear_algebra = TRUE, locale = TRUE,
```

```

##      installed_packages = TRUE, machine = TRUE)
## is_blas_optimize : function (results)
## plot_past : function (test_group, blas_optimize = NULL, cores = 0, log = "y")
## rank_results : function (results, blas_optimize = is_blas_optimize(results), verbose = TRUE)
## upload_results : function (results, url = "http://www.mas.ncl.ac.uk/~ncsg3/form.php", args = NULL,
##      id_prefix = "")
lsf.str("package:benchmarkmeData")

## get_datatable_past : function (test_group, blas_optimize = NULL, cores = 0)
## is_blas_optimize : function (results)
## make_data_set : function (from)
## move_files : function (from, to)
## plot_past : function (test_group, blas_optimize = NULL, cores = 0, log = "y")
## select_results : function (test_group, results = NULL, blas_optimize = NULL, cores = 0)
## summarise_results : function (res)
## This next line takes some time
benchmark_std()

## # Programming benchmarks (5 tests):
## 3,500,000 Fibonacci numbers calculation (vector calc): 0.178 (sec).
## Grand common divisors of 1,000,000 pairs (recursion): 0.476 (sec).
## Creation of a 3,500 x 3,500 Hilbert matrix (matrix calc): 0.225 (sec).
## Creation of a 3,000 x 3,000 Toeplitz matrix (loops): 0.965 (sec).
## Escoufier's method on a 60 x 60 matrix (mixed): 0.608 (sec).
## # Matrix calculation benchmarks (5 tests):
## Creation, transp., deformation of a 5,000 x 5,000 matrix: 0.515 (sec).
## 2,500 x 2,500 normal distributed random matrix^1,000: 0.175 (sec).
## Sorting of 7,000,000 random values: 0.605 (sec).
## 2,500 x 2,500 cross-product matrix (b = a' * a): 0.375 (sec).
## Linear regr. over a 5,000 x 500 matrix (c = a \ b'): 0.0357 (sec).
## # Matrix function benchmarks (5 tests):
## Cholesky decomposition of a 3,000 x 3,000 matrix: 0.221 (sec).
## Determinant of a 2,500 x 2,500 random matrix: 0.196 (sec).
## Eigenvalues of a 640 x 640 random matrix: 0.405 (sec).
## FFT over 2,500,000 random values: 0.254 (sec).
## Inverse of a 1,600 x 1,600 random matrix: 0.258 (sec).

##      user system elapsed      test test_group cores
## 1  0.224  0.004  0.229      fib      prog      0
## 2  0.147  0.008  0.155      fib      prog      0
## 3  0.142  0.008  0.150      fib      prog      0
## 4  0.569  0.032  0.601      gcd      prog      0
## 5  0.401  0.000  0.401      gcd      prog      0
## 6  0.425  0.001  0.426      gcd      prog      0
## 7  0.212  0.036  0.248    hilbert      prog      0

```

```

## 8 0.234 0.015 0.251      hilbert      prog      0
## 9 0.143 0.032 0.175      hilbert      prog      0
## 10 0.972 0.000 0.972     toeplitz     prog      0
## 11 0.966 0.000 0.967     toeplitz     prog      0
## 12 0.956 0.000 0.956     toeplitz     prog      0
## 13 0.586 0.043 0.631     escoufier     prog      0
## 14 0.606 0.000 0.606     escoufier     prog      0
## 15 0.587 0.000 0.587     escoufier     prog      0
## 16 0.530 0.024 0.555      manip matrix_cal 0
## 17 0.560 0.028 0.588      manip matrix_cal 0
## 18 0.365 0.036 0.401      manip matrix_cal 0
## 19 0.163 0.016 0.179      power matrix_cal 0
## 20 0.156 0.016 0.172      power matrix_cal 0
## 21 0.152 0.020 0.173      power matrix_cal 0
## 22 0.587 0.020 0.606      sort matrix_cal 0
## 23 0.601 0.004 0.606      sort matrix_cal 0
## 24 0.597 0.004 0.602      sort matrix_cal 0
## 25 2.667 1.452 0.390 cross_product matrix_cal 0
## 26 2.665 1.688 0.405 cross_product matrix_cal 0
## 27 2.672 1.021 0.329 cross_product matrix_cal 0
## 28 0.279 0.181 0.041      lm matrix_cal 0
## 29 0.277 0.184 0.040      lm matrix_cal 0
## 30 0.254 0.047 0.026      lm matrix_cal 0
## 31 1.839 0.976 0.292      cholesky matrix_fun 0
## 32 1.643 0.303 0.184      cholesky matrix_fun 0
## 33 1.547 0.433 0.188      cholesky matrix_fun 0
## 34 1.821 0.287 0.197      determinant matrix_fun 0
## 35 1.834 0.277 0.197      determinant matrix_fun 0
## 36 1.792 0.296 0.195      determinant matrix_fun 0
## 37 1.401 2.851 0.367      eigen matrix_fun 0
## 38 1.547 2.889 0.425      eigen matrix_fun 0
## 39 1.527 2.886 0.422      eigen matrix_fun 0
## 40 0.253 0.005 0.258      fft matrix_fun 0
## 41 0.252 0.008 0.260      fft matrix_fun 0
## 42 0.239 0.005 0.244      fft matrix_fun 0
## 43 1.657 1.802 0.334      inverse matrix_fun 0
## 44 1.904 1.072 0.275      inverse matrix_fun 0
## 45 1.470 0.391 0.164      inverse matrix_fun 0

```

```
get_byte_compiler()
```

```
## byte_optimize
##          2
```

```
get_linear_algebra()
```

```

## $blas
## [1] "/usr/lib/x86_64-linux-gnu/openblas-pthread/libblas.so.3"
##
## $lapack
## [1] "/usr/lib/x86_64-linux-gnu/openblas-pthread/liblapack.so.3"

```

```
get_sys_details()
```

```

## $sys_info
## $sys_info$sysname

```

```

## [1] "Linux"
##
## $sys_info$release
## [1] "5.4.0-74-generic"
##
## $sys_info$version
## [1] "#83-Ubuntu SMP Sat May 8 02:35:39 UTC 2021"
##
## $sys_info$nodename
## [1] "M21"
##
## $sys_info$machine
## [1] "x86_64"
##
## $sys_info$login
## [1] "unknown"
##
## $sys_info$user
## [1] "john"
##
## $sys_info$effective_user
## [1] "john"
##
##
## $platform_info
## $platform_info$OS.type
## [1] "unix"
##
## $platform_info$file.sep
## [1] "/"
##
## $platform_info$dynlib.ext
## [1] ".so"
##
## $platform_info$GUI
## [1] "X11"
##
## $platform_info$endian
## [1] "little"
##
## $platform_info$pkgType
## [1] "source"
##
## $platform_info$path.sep
## [1] ":"
##
## $platform_info$r_arch
## [1] ""
##
##
## $r_version
## $r_version$platform
## [1] "x86_64-pc-linux-gnu"
##

```

```

## $r_version$arch
## [1] "x86_64"
##
## $r_version$os
## [1] "linux-gnu"
##
## $r_version$system
## [1] "x86_64, linux-gnu"
##
## $r_version$status
## [1] ""
##
## $r_version$major
## [1] "4"
##
## $r_version$minor
## [1] "1.0"
##
## $r_version$year
## [1] "2021"
##
## $r_version$month
## [1] "05"
##
## $r_version$day
## [1] "18"
##
## $r_version$`svn rev`
## [1] "80317"
##
## $r_version$language
## [1] "R"
##
## $r_version$version.string
## [1] "R version 4.1.0 (2021-05-18)"
##
## $r_version$nickname
## [1] "Camp Pontanezen"
##
##
## $ram
## 33.5 GB
##
## $cpu
## $cpu$vendor_id
## [1] "GenuineIntel"
##
## $cpu$model_name
## [1] "Intel(R) Core(TM) i5-10400 CPU @ 2.90GHz"
##
## $cpu$no_of_cores
## [1] 12
##
##

```

```

## $byte_compiler
## byte_optimize
##      2
##
## $linear_algebra
## $linear_algebra$blas
## [1] "/usr/lib/x86_64-linux-gnu/openblas-pthread/libblas.so.3"
##
## $linear_algebra$lapack
## [1] "/usr/lib/x86_64-linux-gnu/openblas-pthread/liblapack.so.3"
##
##
## $locale
## [1] "LC_CTYPE=en_CA.UTF-8;LC_NUMERIC=C;LC_TIME=en_CA.UTF-8;LC_COLLATE=en_CA.UTF-8;LC_MONETARY=en_CA.UTF-8;LC_MESSAGES=en_CA.UTF-8;LC_PAPER=en_CA.UTF-8;LC_ADDRESS=en_CA.UTF-8;LC_TELEPHONE=en_CA.UTF-8;LC_IDENTIFICATION=en_CA.UTF-8;LC_NAME=en_CA.UTF-8;LC_POLICY=en_CA.UTF-8;LC_CALENDAR=en_CA.UTF-8;LC_CURRENCY=en_CA.UTF-8;LC_MEASUREMENT=en_CA.UTF-8;LC_PAPER=en_CA.UTF-8;LC_ADDRESS=en_CA.UTF-8;LC_TELEPHONE=en_CA.UTF-8;LC_IDENTIFICATION=en_CA.UTF-8;LC_NAME=en_CA.UTF-8;LC_POLICY=en_CA.UTF-8;LC_CALENDAR=en_CA.UTF-8;LC_CURRENCY=en_CA.UTF-8;LC_MEASUREMENT=en_CA.UTF-8"
##
## $installed_packages
##
##      Package
## abind      "abind"
## ade4       "ade4"
## adegenet   "adegenet"
## ADGofTest  "ADGofTest"
## afex       "afex"
## AICcmodavg "AICcmodavg"
## AlphaBeta  "AlphaBeta"
## ape        "ape"
## arm        "arm"
## askpass    "askpass"
## assertthat "assertthat"
## backports  "backports"
## bayesplot  "bayesplot"
## BB         "BB"
## bbmle      "bbmle"
## BCEA       "BCEA"
## bdsmatrix  "bdsmatrix"
## beeswarm   "beeswarm"
## benchmarkme "benchmarkme"
## benchmarkmeData "benchmarkmeData"
## BH         "BH"
## Biobase    "Biobase"
## BiocGenerics "BiocGenerics"
## BiocManager "BiocManager"
## BiocParallel "BiocParallel"
## BiocVersion "BiocVersion"
## bit        "bit"
## bit64      "bit64"
## blob       "blob"
## Bolstad2   "Bolstad2"
## bookdown   "bookdown"
## brew       "brew"
## bridgesampling "bridgesampling"
## brms       "brms"
## Brobdingnag "Brobdingnag"
## broom      "broom"
## bslib      "bslib"

```



## cachem	"cachem"
## car	"car"
## caracas	"caracas"
## carData	"carData"
## caret	"caret"
## cccd	"cccd"
## cellranger	"cellranger"
## checkmate	"checkmate"
## classInt	"classInt"
## cli	"cli"
## clipr	"clipr"
## clisymbols	"clisymbols"
## clusterPower	"clusterPower"
## coda	"coda"
## coin	"coin"
## colorspace	"colorspace"
## colourpicker	"colourpicker"
## combinat	"combinat"
## commonmark	"commonmark"
## config	"config"
## conquer	"conquer"
## contfrac	"contfrac"
## copula	"copula"
## coRanking	"coRanking"
## corpcor	"corpcor"
## corrplot	"corrplot"
## covr	"covr"
## cowplot	"cowplot"
## crancache	"crancache"
## cranlike	"cranlike"
## credentials	"credentials"
## crosstalk	"crosstalk"
## CRTSize	"CRTSize"
## cubature	"cubature"
## curl	"curl"
## CVST	"CVST"
## DAAG	"DAAG"
## DBI	"DBI"
## dbplyr	"dbplyr"
## debugme	"debugme"
## deldir	"deldir"
## DEoptimR	"DEoptimR"
## Deriv	"Deriv"
## deSolve	"deSolve"
## devtools	"devtools"
## dfoptim	"dfoptim"
## DHARMa	"DHARMa"
## diagram	"diagram"
## diffusionMap	"diffusionMap"
## dimRed	"dimRed"
## doParallel	"doParallel"
## dotCall64	"dotCall64"
## dplyr	"dplyr"
## DRR	"DRR"

## DT	"DT"
## dtplyr	"dtplyr"
## dygraphs	"dygraphs"
## e1071	"e1071"
## effects	"effects"
## eha	"eha"
## ellipse	"ellipse"
## elliptic	"elliptic"
## emdbook	"emdbook"
## emmeans	"emmeans"
## energy	"energy"
## epiphy	"epiphy"
## estimability	"estimability"
## expm	"expm"
## ez	"ez"
## ezsim	"ezsim"
## farver	"farver"
## fastGHQuad	"fastGHQuad"
## fastICA	"fastICA"
## fastmap	"fastmap"
## fastmatch	"fastmatch"
## fBasics	"fBasics"
## fdrtool	"fdrtool"
## fields	"fields"
## fitODBOD	"fitODBOD"
## flexsurv	"flexsurv"
## FNN	"FNN"
## fOptions	"fOptions"
## forcats	"forcats"
## foreach	"foreach"
## formatR	"formatR"
## Formula	"Formula"
## freetypeharfbuzz	"freetypeharfbuzz"
## fs	"fs"
## futile.logger	"futile.logger"
## futile.options	"futile.options"
## future	"future"
## future.apply	"future.apply"
## GA	"GA"
## gamlss	"gamlss"
## gamlss.data	"gamlss.data"
## gamlss.dist	"gamlss.dist"
## gamm4	"gamm4"
## gap	"gap"
## gargle	"gargle"
## gdata	"gdata"
## geepack	"geepack"
## generics	"generics"
## GenSA	"GenSA"
## geoR	"geoR"
## gert	"gert"
## ggbeeswarm	"ggbeeswarm"
## ggforce	"ggforce"
## ggplot2	"ggplot2"

## ggpol	"ggpol"
## ggpubr	"ggpubr"
## ggrepel	"ggrepel"
## ggResidpanel	"ggResidpanel"
## ggbridges	"ggbridges"
## ggsci	"ggsci"
## ggsignif	"ggsignif"
## gh	"gh"
## ghyp	"ghyp"
## gitcreds	"gitcreds"
## glasso	"glasso"
## glmmTMB	"glmmTMB"
## glmnet	"glmnet"
## globals	"globals"
## gmailr	"gmailr"
## gmm	"gmm"
## gmodels	"gmodels"
## googledrive	"googledrive"
## googlesheets4	"googlesheets4"
## gower	"gower"
## graphicalVAR	"graphicalVAR"
## gridBase	"gridBase"
## gridExtra	"gridExtra"
## gsl	"gsl"
## gss	"gss"
## gstat	"gstat"
## gtable	"gtable"
## gtools	"gtools"
## haplotypes	"haplotypes"
## haven	"haven"
## heemod	"heemod"
## here	"here"
## Hmisc	"Hmisc"
## hms	"hms"
## HSAUR3	"HSAUR3"
## htmlTable	"htmlTable"
## httpuv	"httpuv"
## httr	"httr"
## hypergeo	"hypergeo"
## ids	"ids"
## igraph	"igraph"
## ini	"ini"
## inline	"inline"
## insight	"insight"
## intervals	"intervals"
## ipred	"ipred"
## IsingSampler	"IsingSampler"
## ISLR	"ISLR"
## isoband	"isoband"
## iterators	"iterators"
## Jmisc	"Jmisc"
## jpeg	"jpeg"
## jquerylib	"jquerylib"
## jtools	"jtools"

## kableExtra	"kableExtra"
## keras	"keras"
## kernlab	"kernlab"
## kutils	"kutils"
## labeling	"labeling"
## lambda.r	"lambda.r"
## languageR	"languageR"
## later	"later"
## latticeExtra	"latticeExtra"
## lava	"lava"
## lavaan	"lavaan"
## lavaSearch2	"lavaSearch2"
## lazyeval	"lazyeval"
## lbfgs	"lbfgs"
## lbfgsb3c	"lbfgsb3c"
## LearnBayes	"LearnBayes"
## libcoin	"libcoin"
## lisrelToR	"lisrelToR"
## listenv	"listenv"
## lle	"lle"
## lme4	"lme4"
## lmerTest	"lmerTest"
## lmtest	"lmtest"
## loe	"loe"
## logitnorm	"logitnorm"
## loo	"loo"
## lpSolve	"lpSolve"
## lubridate	"lubridate"
## manipulateWidget	"manipulateWidget"
## maps	"maps"
## maptools	"maptools"
## MASS	"MASS"
## mathjaxr	"mathjaxr"
## matrixcalc	"matrixcalc"
## MatrixModels	"MatrixModels"
## matrixStats	"matrixStats"
## memoise	"memoise"
## MEMSS	"MEMSS"
## metaSEM	"metaSEM"
## mets	"mets"
## mi	"mi"
## microbenchmark	"microbenchmark"
## miniUI	"miniUI"
## minpack.lm	"minpack.lm"
## minqa	"minqa"
## mitools	"mitools"
## mixmeta	"mixmeta"
## mlmRev	"mlmRev"
## mnormt	"mnormt"
## ModelMetrics	"ModelMetrics"
## modelr	"modelr"
## modeltools	"modeltools"
## moments	"moments"
## msm	"msm"

## mstate	"mstate"
## muhaz	"muhaz"
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## adegenet	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"2.1.3"
## ADGofTest	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.3"
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## forcats           "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.5.1"
## foreach           "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.5.1"
## formatR           "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.11"
## Formula           "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.2-4"
## freetypeharfbuzz  "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.2.6"
## fs                "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.5.0"
## futile.logger     "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.4.3"
## futile.options    "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.0.1"
## future            "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.21.0"
## future.apply      "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.7.0"
## GA                "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "3.2.1"
## gamlss            "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "5.3-4"
## gamlss.data       "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "6.0-1"
## gamlss.dist       "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "5.3-2"
## gamm4             "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.2-6"
## gap              "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.2.3-1"
## gargle            "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.1.0"
## gdata             "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.18.0"
## geepack           "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.3-2"
## generics          "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.1.0"
## GenSA             "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.1.7"
## geoR              "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.8-1"
## gert              "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.3.0"
## ggbeeswarm        "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.6.0"
## ggforce           "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.3.3"
## ggplot2           "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "3.3.3"
## ggpol            "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.0.7"
## ggpubr            "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.4.0"
## ggrepel           "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.9.1"
## ggResidpanel      "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.3.0"
## ggridges          "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.5.3"
## ggsci             "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.9"
## ggsignif          "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.6.1"
## gh                "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.3.0"
## ghyp             "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.6.1"
## gitcreds          "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.1.1"
## glasso            "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.11"
## glmmTMB           "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.0.2.1"

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## glmnet	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"4.1-1"
## globals	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.14.0"
## gmailr	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.0.0"
## gmm	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.6-6"
## gmodels	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"2.18.1"
## googledrive	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.0.1"
## googlesheets4	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.3.0"
## gower	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.2.2"
## graphicalVAR	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.2.4"
## gridBase	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.4-7"
## gridExtra	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"2.3"
## gsl	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"2.1-6"
## gss	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"2.2-2"
## gstat	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"2.0-7"
## gtable	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.3.0"
## gtools	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"3.9.2"
## haplotypes	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.1.2"
## haven	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"2.4.1"
## heemod	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.14.2"
## here	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.0.1"
## Hmisc	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"4.5-0"
## hms	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.1.0"
## HSAUR3	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.0-11"
## htmlTable	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"2.2.1"
## httpuv	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.6.1"
## httr	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.4.2"
## hypergeo	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.2-13"
## ids	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.0.1"
## igraph	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.2.6"
## ini	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.3.1"
## inline	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.3.19"
## insight	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.14.1"
## intervals	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.15.2"
## ipred	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.9-11"
## IsingSampler	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.2.1"
## ISLR	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.2"
## isoband	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.2.4"
## iterators	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.0.13"
## Jmisc	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.3.1"
## jpeg	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.1-8.1"
## jquerylib	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.1.4"
## jtools	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"2.1.3"
## kableExtra	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.3.4"
## keras	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"2.4.0"
## kernlab	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.9-29"
## kutils	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.70"
## labeling	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.4.2"
## lambda.r	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.2.4"
## languageR	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.5.0"
## later	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.2.0"
## latticeExtra	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.6-29"
## lava	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.6.9"
## lavaan	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.6-8"
## lavaSearch2	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.5.6"

## lazyeval	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.2.2"
## lbfgs	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.2.1"
## lbfgsb3c	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"2020-3.2"
## LearnBayes	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"2.15.1"
## libcoin	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.0-8"
## lisrelToR	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.1.4"
## listenv	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.8.0"
## lle	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.1"
## lme4	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.1-27"
## lmerTest	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"3.1-3"
## lmtest	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.9-38"
## loe	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.1"
## logitnorm	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.8.38"
## loo	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"2.4.1"
## lpSolve	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"5.6.15"
## lubridate	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.7.10"
## manipulateWidget	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.11.0"
## maps	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"3.3.0"
## maptools	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.1-1"
## MASS	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"7.3-54"
## mathjaxr	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.4-0"
## matrixcalc	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.0-4"
## MatrixModels	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.5-0"
## matrixStats	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.59.0"
## memoise	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"2.0.0"
## MEMSS	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.9-3"
## metaSEM	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.2.5.1"
## mets	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.2.8.1"
## mi	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.0"
## microbenchmark	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.4-7"
## miniUI	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.1.1.1"
## minpack.lm	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.2-1"
## minqa	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.2.4"
## mitools	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"2.4"
## mixmeta	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.1.3"
## mlmRev	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.0-8"
## mnormt	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"2.0.2"
## ModelMetrics	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.2.2.2"
## modelr	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.1.8"
## modeltools	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.2-23"
## moments	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.14"
## msm	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.6.8"
## mstate	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.3.1"
## muhaz	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.2.6.4"
## multcomp	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.4-17"
## MuMIn	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.43.17"
## munsell	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.5.0"
## mvmeta	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.0.3"
## mvnfast	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.2.7"
## mvtnorm	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.1-2"
## network	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.17.0"
## NlcOptim	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.6"
## nleqslv	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"3.3.2"
## nlrmrt	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"2016.3.2"

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## nloptr "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.2.2.2"
## nlsalt "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.1.0"
## nlspkg "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.1.0"
## nlsrc "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2019.9.7"
## NMF "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.23.0"
## numDeriv "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2016.8-1.1"
## OpenMx "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.19.5"
## openssl "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.4.4"
## openxlsx "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "4.2.3"
## optextras "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2019-12.4"
## optimx "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2021-6.12"
## ore "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.6.3"
## packrat "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.6.0"
## pander "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.6.4"
## parallelly "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.26.0"
## parfm "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.7.6"
## parsedate "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.2.1"
## pbapply "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.4-3"
## pbivnorm "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.6.0"
## pbkrtest "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.5.1"
## pbmcapply "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.5.0"
## pbv "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.4-22"
## pcaL1 "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.5.4"
## pcaPP "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.9-74"
## pegas "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.0-1"
## permute "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.9-5"
## phangorn "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.7.0"
## phylobase "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.8.10"
## phylolm "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.6.2"
## pixmap "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.4-12"
## pkgbuild "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.2.0"
## pkgmaker "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.32.2"
## PKPDmodels "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.3.2"
## plogr "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.2.0"
## plotly "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "4.9.4"
## plotrix "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "3.8-1"
## plyr "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.8.6"
## png "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.1-7"
## polyspline "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.1.19"
## polyclip "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.10-0"
## polycor "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.7-10"
## polynom "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.4-0"
## prettydoc "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.4.1"
## prettyunits "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.1.1"
## pROC "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.17.0.1"
## prodlim "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2019.11.13"
## progress "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.2.2"
## projpred "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.0.2"
## promises "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.2.0.1"
## proxy "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.4-26"
## pryr "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.1.4"
## pso "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.0.3"
## pspline "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.0-18"
## psych "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.1.3"

```



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## psychTools      "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.1.3"
## purrr            "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.3.4"
## qgam             "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.3.3"
## qgraph           "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.6.9"
## qqplotr          "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.0.5"
## qra              "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.1.8"
## quadprog         "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.5-8"
## quantreg         "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "5.86"
## R.cache          "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.15.0"
## R.methodsS3      "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.8.1"
## R.oo             "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.24.0"
## R.rsp            "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.44.0"
## R.utils          "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.10.1"
## RandomFields     "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "3.3.8"
## RandomFieldsUtils "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.5.3"
## RANN             "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.6.1"
## rappdirs         "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.3.3"
## raster           "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "3.4-10"
## rbibutils        "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.2"
## Rcgmin           "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2013-2.21"
## rcmdcheck        "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.3.3"
## RColorBrewer     "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.1-2"
## RcppArmadillo    "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.10.5.0.0"
## RcppEigen        "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.3.3.9.1"
## RcppFaddeeva     "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.1.0"
## RcppGSL          "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.3.8"
## RcppParallel     "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "5.1.4"
## RcppZiggurat     "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.1.6"
## Rdpack           "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.1.2"
## readr            "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.4.0"
## readxl           "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.3.1"
## recipes          "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.1.16"
## registry         "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.5-1"
## regsem           "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.8.0"
## rematch         "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.0.1"
## remotes          "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.4.0"
## reportr         "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.3.0"
## reprex          "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.0.0"
## reshape         "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.8.8"
## reshape2        "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.4.4"
## reticulate       "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.20"
## revdepcheck      "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.0.0.9001"
## rex             "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.2.0"
## Rfast           "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.0.3"
## rgeos           "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.5-5"
## rggho           "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.0.1"
## rgl             "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.106.8"
## rio            "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.5.26"
## rms            "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "6.2-0"
## rncl           "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.8.4"
## RNeXML         "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.4.5"
## rngtools       "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.5"
## robustbase     "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.93-8"
## robustlmm      "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.4-4"

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## rockchalk "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.8.144"
## roptim "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.1.5"
## roxygen2 "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "7.1.1"
## rpf "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.0.7"
## rr2 "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.0.2"
## rrBLUP "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "4.6.1"
## rsconnect "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.8.18"
## Rsolnp "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.16"
## RSpectra "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.16-0"
## RSQLite "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.2.7"
## rstan "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.21.2"
## rstanarm "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.21.1"
## rstantools "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.1.1"
## rstatix "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.7.0"
## rstpm2 "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.5.2"
## Rtsne "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.15"
## RUnit "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.4.32"
## rvcheck "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.1.8"
## rversions "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.1.1"
## rvest "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.0.0"
## Rvmmmin "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2018-4.17.1"
## Ryacas "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.1.3.1"
## s2 "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.0.5"
## sandwich "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "3.0-1"
## sass "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.4.0"
## scales "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.1.1"
## scatterpie "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.1.6"
## scatterplot3d "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.3-41"
## segmented "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.3-4"
## selectr "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.4-2"
## sem "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "3.1-11"
## semEff "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.5.0"
## semPlot "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.1.2"
## seqinr "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "4.2-8"
## sessioninfo "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.1.1"
## setRNG "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2013.9-1"
## sf "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.0-0"
## shape "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.4.6"
## shiny "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.6.0"
## shinyBS "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.61"
## shinycssloaders "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.0.0"
## shinyjs "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.0.0"
## shinystan "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.5.0"
## shinythemes "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.2.0"
## sn "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.0.0"
## sna "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.6"
## snow "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.4-3"
## snowfall "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.84-6.1"
## soma "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.1.1"
## sourcetools "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.1.7"
## sp "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.4-5"
## spacetime "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.2-4"
## spam "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.6-0"
## SparseM "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.81"

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## spData                "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.3.8"
## spdep                  "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.1-8"
## splancs                 "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.01-42"
## SQUAREM                 "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2021.1"
## stabledist              "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.7-1"
## StanHeaders             "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.21.0-7"
## statespacer             "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.4.0"
## statmod                 "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.4.36"
## statnet.common          "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "4.5.0"
## subplex                 "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.6"
## SurvCorr                "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.0"
## survey                  "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "4.0"
## svglite                 "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.0.0"
## sys                     "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "3.4"
## tcltk2                  "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.2-11"
## tensorflow              "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.5.0"
## testDriveR              "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.5.1"
## tfruns                  "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.5.0"
## TH.data                 "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.0-10"
## threejs                  "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.3.3"
## tidyr                   "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.1.3"
## tidyselect              "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.1.1"
## tidyverse               "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.3.1"
## timeDate                "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "3043.102"
## timereg                 "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.0.0"
## timeSeries              "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "3062.100"
## tkrplot                 "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.0-25"
## TMB                      "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.7.20"
## tmvnsim                 "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.0-2"
## tmvtnorm                "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.4-10"
## transport               "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.12-2"
## triangle                "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.12"
## truncnorm               "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.0-8"
## tweenr                  "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.0.2"
## ucminf                  "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.1-4"
## umap                    "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.2.7.0"
## units                   "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.7-2"
## unmarked                "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.1.1"
## usethis                 "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.0.1"
## VCA                     "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.4.3"
## vegan                   "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.5-7"
## VGAM                    "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.1-5"
## vipor                   "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.4.5"
## viridis                 "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.6.1"
## viridisLite             "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.4.0"
## visNetwork              "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "2.0.9"
## webshot                 "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.5.2"
## whisker                 "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.4"
## whoami                  "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.3.0"
## wk                      "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.4.1"
## XML                     "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "3.99-0.6"
## xopen                   "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.0.0"
## xtable                  "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "1.8-4"
## xts                     "/home/john/R/x86_64-pc-linux-gnu-library/4.1" "0.12.1"

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## YieldCurve	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"4.1"
## zeallot	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.1.0"
## zipfR	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"0.6-70"
## zoo	"/home/john/R/x86_64-pc-linux-gnu-library/4.1"	"1.8-9"
## base64enc	"/usr/lib/R/site-library"	"0.1-3"
## brio	"/usr/lib/R/site-library"	"1.1.2"
## cairoDevice	"/usr/lib/R/site-library"	"2.28.2"
## callr	"/usr/lib/R/site-library"	"3.7.0"
## cli	"/usr/lib/R/site-library"	"2.5.0"
## cpp11	"/usr/lib/R/site-library"	"0.2.7"
## crayon	"/usr/lib/R/site-library"	"1.4.1"
## curl	"/usr/lib/R/site-library"	"4.3.1"
## data.table	"/usr/lib/R/site-library"	"1.14.0"
## desc	"/usr/lib/R/site-library"	"1.3.0"
## diffobj	"/usr/lib/R/site-library"	"0.3.4"
## digest	"/usr/lib/R/site-library"	"0.6.27"
## ellipsis	"/usr/lib/R/site-library"	"0.3.2"
## evaluate	"/usr/lib/R/site-library"	"0.14"
## fansi	"/usr/lib/R/site-library"	"0.5.0"
## flextable	"/usr/lib/R/site-library"	"0.6.6"
## fontBitstreamVera	"/usr/lib/R/site-library"	"0.1.1"
## fontLiberation	"/usr/lib/R/site-library"	"0.1.0"
## fontquiver	"/usr/lib/R/site-library"	"0.2.1"
## freetypeharfbuzz	"/usr/lib/R/site-library"	"0.2.5"
## gdtools	"/usr/lib/R/site-library"	"0.2.3"
## glue	"/usr/lib/R/site-library"	"1.4.2"
## gmp	"/usr/lib/R/site-library"	"0.6-2"
## highr	"/usr/lib/R/site-library"	"0.9"
## htmltools	"/usr/lib/R/site-library"	"0.5.1.1"
## htmlwidgets	"/usr/lib/R/site-library"	"1.5.3"
## jsonlite	"/usr/lib/R/site-library"	"1.7.2"
## knitr	"/usr/lib/R/site-library"	"1.33"
## lifecycle	"/usr/lib/R/site-library"	"1.0.0"
## magrittr	"/usr/lib/R/site-library"	"2.0.1"
## markdown	"/usr/lib/R/site-library"	"1.1"
## mime	"/usr/lib/R/site-library"	"0.10"
## officer	"/usr/lib/R/site-library"	"0.3.18"
## pillar	"/usr/lib/R/site-library"	"1.6.1"
## pkgconfig	"/usr/lib/R/site-library"	"2.0.3"
## pkgload	"/usr/lib/R/site-library"	"1.2.1"
## praise	"/usr/lib/R/site-library"	"1.0.0"
## processx	"/usr/lib/R/site-library"	"3.5.2"
## ps	"/usr/lib/R/site-library"	"1.6.0"
## R6	"/usr/lib/R/site-library"	"2.5.0"
## Rcpp	"/usr/lib/R/site-library"	"1.0.6"
## rematch2	"/usr/lib/R/site-library"	"2.1.2"
## rJava	"/usr/lib/R/site-library"	"1.0-4"
## rjson	"/usr/lib/R/site-library"	"0.2.20"
## rJython	"/usr/lib/R/site-library"	"0.0-4"
## rlang	"/usr/lib/R/site-library"	"0.4.11"
## rmarkdown	"/usr/lib/R/site-library"	"2.8"
## Rmpfr	"/usr/lib/R/site-library"	"0.8-4"
## rprojroot	"/usr/lib/R/site-library"	"2.0.2"
## rstudioapi	"/usr/lib/R/site-library"	"0.13"

## rSymPy	"/usr/lib/R/site-library"	"0.2-1.2"
## stringi	"/usr/lib/R/site-library"	"1.6.2"
## stringr	"/usr/lib/R/site-library"	"1.4.0"
## systemfonts	"/usr/lib/R/site-library"	"1.0.2"
## testthat	"/usr/lib/R/site-library"	"3.0.2"
## tibble	"/usr/lib/R/site-library"	"3.1.2"
## tinytex	"/usr/lib/R/site-library"	"0.32"
## utf8	"/usr/lib/R/site-library"	"1.2.1"
## uuid	"/usr/lib/R/site-library"	"0.1-4"
## V8	"/usr/lib/R/site-library"	"3.4.2"
## vctrs	"/usr/lib/R/site-library"	"0.3.8"
## waldo	"/usr/lib/R/site-library"	"0.2.5"
## withr	"/usr/lib/R/site-library"	"2.4.2"
## xfun	"/usr/lib/R/site-library"	"0.23"
## xml2	"/usr/lib/R/site-library"	"1.3.2"
## yaml	"/usr/lib/R/site-library"	"2.2.1"
## zip	"/usr/lib/R/site-library"	"2.2.0"
## base	"/usr/lib/R/library"	"4.1.0"
## boot	"/usr/lib/R/library"	"1.3-28"
## class	"/usr/lib/R/library"	"7.3-19"
## cluster	"/usr/lib/R/library"	"2.1.2"
## codetools	"/usr/lib/R/library"	"0.2-18"
## compiler	"/usr/lib/R/library"	"4.1.0"
## datasets	"/usr/lib/R/library"	"4.1.0"
## foreign	"/usr/lib/R/library"	"0.8-81"
## graphics	"/usr/lib/R/library"	"4.1.0"
## grDevices	"/usr/lib/R/library"	"4.1.0"
## grid	"/usr/lib/R/library"	"4.1.0"
## KernSmooth	"/usr/lib/R/library"	"2.23-20"
## lattice	"/usr/lib/R/library"	"0.20-44"
## MASS	"/usr/lib/R/library"	"7.3-54"
## Matrix	"/usr/lib/R/library"	"1.3-4"
## methods	"/usr/lib/R/library"	"4.1.0"
## mgcv	"/usr/lib/R/library"	"1.8-36"
## nlme	"/usr/lib/R/library"	"3.1-152"
## nnet	"/usr/lib/R/library"	"7.3-16"
## parallel	"/usr/lib/R/library"	"4.1.0"
## rpart	"/usr/lib/R/library"	"4.1-15"
## spatial	"/usr/lib/R/library"	"7.3-14"
## splines	"/usr/lib/R/library"	"4.1.0"
## stats	"/usr/lib/R/library"	"4.1.0"
## stats4	"/usr/lib/R/library"	"4.1.0"
## survival	"/usr/lib/R/library"	"3.2-11"
## tcltk	"/usr/lib/R/library"	"4.1.0"
## tools	"/usr/lib/R/library"	"4.1.0"
## utils	"/usr/lib/R/library"	"4.1.0"
##	Priority	
## abind	NA	
## ade4	NA	
## adegenet	NA	
## ADGofTest	NA	
## afex	NA	
## AICcmodavg	NA	
## AlphaBeta	NA	

## ape	NA
## arm	NA
## askpass	NA
## assertthat	NA
## backports	NA
## bayesplot	NA
## BB	NA
## bbmle	NA
## BCEA	NA
## bdsmatrix	NA
## beeswarm	NA
## benchmarkme	NA
## benchmarkmeData	NA
## BH	NA
## Biobase	NA
## BiocGenerics	NA
## BiocManager	NA
## BiocParallel	NA
## BiocVersion	NA
## bit	NA
## bit64	NA
## blob	NA
## Bolstad2	NA
## bookdown	NA
## brew	NA
## bridgesampling	NA
## brms	NA
## Brobdingnag	NA
## broom	NA
## bslib	NA
## cachem	NA
## car	NA
## caracas	NA
## carData	NA
## caret	NA
## ccccd	NA
## cellranger	NA
## checkmate	NA
## classInt	NA
## cli	NA
## clipr	NA
## clisymbols	NA
## clusterPower	NA
## coda	NA
## coin	NA
## colorspace	NA
## colourpicker	NA
## combinat	NA
## commonmark	NA
## config	NA
## conquer	NA
## contfrac	NA
## copula	NA
## coRanking	NA

## corpcor	NA
## corrplot	NA
## covr	NA
## cowplot	NA
## crancache	NA
## cranlike	NA
## credentials	NA
## crosstalk	NA
## CRTSize	NA
## cubature	NA
## curl	NA
## CVST	NA
## DAAG	NA
## DBI	NA
## dbplyr	NA
## debugme	NA
## deldir	NA
## DEoptimR	NA
## Deriv	NA
## deSolve	NA
## devtools	NA
## dfoptim	NA
## DHARMA	NA
## diagram	NA
## diffusionMap	NA
## dimRed	NA
## doParallel	NA
## dotCall64	NA
## dplyr	NA
## DRR	NA
## DT	NA
## dtplyr	NA
## dygraphs	NA
## e1071	NA
## effects	NA
## eha	NA
## ellipse	NA
## elliptic	NA
## emdbook	NA
## emmeans	NA
## energy	NA
## epiphy	NA
## estimability	NA
## expm	NA
## ez	NA
## ezsim	NA
## farver	NA
## fastGHQuad	NA
## fastICA	NA
## fastmap	NA
## fastmatch	NA
## fBasics	NA
## fdrtool	NA
## fields	NA

## fitODBOD	NA
## flexsurv	NA
## FNN	NA
## fOptions	NA
## forcats	NA
## foreach	NA
## formatR	NA
## Formula	NA
## freetypeharfbuzz	NA
## fs	NA
## futile.logger	NA
## futile.options	NA
## future	NA
## future.apply	NA
## GA	NA
## gamlss	NA
## gamlss.data	NA
## gamlss.dist	NA
## gamm4	NA
## gap	NA
## gargle	NA
## gdata	NA
## geepack	NA
## generics	NA
## GenSA	NA
## geoR	NA
## gert	NA
## ggbeeswarm	NA
## ggforce	NA
## ggplot2	NA
## ggpol	NA
## ggpubr	NA
## ggrepel	NA
## ggResidpanel	NA
## ggridges	NA
## ggsci	NA
## ggsignif	NA
## gh	NA
## ghyp	NA
## gitcreds	NA
## glasso	NA
## glmmTMB	NA
## glmnet	NA
## globals	NA
## gmailr	NA
## gmm	NA
## gmodels	NA
## googledrive	NA
## googlesheets4	NA
## gower	NA
## graphicalVAR	NA
## gridBase	NA
## gridExtra	NA
## gsl	NA



## gss	NA
## gstat	NA
## gtable	NA
## gtools	NA
## haplotypes	NA
## haven	NA
## heemod	NA
## here	NA
## Hmisc	NA
## hms	NA
## HSAUR3	NA
## htmlTable	NA
## httpuv	NA
## httr	NA
## hypergeo	NA
## ids	NA
## igraph	NA
## ini	NA
## inline	NA
## insight	NA
## intervals	NA
## ipred	NA
## IsingSampler	NA
## ISLR	NA
## isoband	NA
## iterators	NA
## Jmisc	NA
## jpeg	NA
## jquerylib	NA
## jtools	NA
## kableExtra	NA
## keras	NA
## kernlab	NA
## kutils	NA
## labeling	NA
## lambda.r	NA
## languageR	NA
## later	NA
## latticeExtra	NA
## lava	NA
## lavaan	NA
## lavaSearch2	NA
## lazyeval	NA
## lbfgs	NA
## lbfgsb3c	NA
## LearnBayes	NA
## libcoin	NA
## lisrelToR	NA
## listenv	NA
## lle	NA
## lme4	NA
## lmerTest	NA
## lmtest	NA
## loe	NA

## logitnorm	NA
## loo	NA
## lpSolve	NA
## lubridate	NA
## manipulateWidget	NA
## maps	NA
## maptools	NA
## MASS	"recommended"
## mathjaxr	NA
## matrixcalc	NA
## MatrixModels	NA
## matrixStats	NA
## memoise	NA
## MEMSS	NA
## metaSEM	NA
## mets	NA
## mi	NA
## microbenchmark	NA
## miniUI	NA
## minpack.lm	NA
## minga	NA
## mitools	NA
## mixmeta	NA
## mlmRev	NA
## mnormt	NA
## ModelMetrics	NA
## modelr	NA
## modeltools	NA
## moments	NA
## msm	NA
## mstate	NA
## muhaz	NA
## multcomp	NA
## MuMIn	NA
## munsell	NA
## mvmeta	NA
## mvnfast	NA
## mvtnorm	NA
## network	NA
## NlcOptim	NA
## nleqslv	NA
## nlmt	NA
## nloptr	NA
## nlsalt	NA
## nlspkg	NA
## nlslr	NA
## NMF	NA
## numDeriv	NA
## OpenMx	NA
## openssl	NA
## openxlsx	NA
## optextras	NA
## optimx	NA
## ore	NA

## packrat	NA
## pander	NA
## parallelly	NA
## parfm	NA
## parsedate	NA
## pbapply	NA
## pbivnorm	NA
## pbkrtest	NA
## pbmcaply	NA
## pbv	NA
## pcaL1	NA
## pcaPP	NA
## pegas	NA
## permute	NA
## phangorn	NA
## phylobase	NA
## phylolm	NA
## pixmap	NA
## pkgbuild	NA
## pkgmaker	NA
## PKPDmodels	NA
## plogr	NA
## plotly	NA
## plotrix	NA
## plyr	NA
## png	NA
## polyspline	NA
## polyclip	NA
## polycor	NA
## polynom	NA
## prettydoc	NA
## prettyunits	NA
## pROC	NA
## prodlim	NA
## progress	NA
## projpred	NA
## promises	NA
## proxy	NA
## pryr	NA
## pso	NA
## pspline	NA
## psych	NA
## psychTools	NA
## purrr	NA
## qgam	NA
## qgraph	NA
## qqplotr	NA
## qra	NA
## quadprog	NA
## quantreg	NA
## R.cache	NA
## R.methodsS3	NA
## R.oo	NA
## R.rsp	NA

## R.utils	NA
## RandomFields	NA
## RandomFieldsUtils	NA
## RANN	NA
## rappdirs	NA
## raster	NA
## rbibutils	NA
## Rcgmin	NA
## rcmdcheck	NA
## RColorBrewer	NA
## RcppArmadillo	NA
## RcppEigen	NA
## RcppFaddeeva	NA
## RcppGSL	NA
## RcppParallel	NA
## RcppZiggurat	NA
## Rdpack	NA
## readr	NA
## readxl	NA
## recipes	NA
## registry	NA
## regsem	NA
## rematch	NA
## remotes	NA
## reportr	NA
## reprex	NA
## reshape	NA
## reshape2	NA
## reticulate	NA
## revdepcheck	NA
## rex	NA
## Rfast	NA
## rgeos	NA
## rgho	NA
## rgl	NA
## rio	NA
## rms	NA
## rncl	NA
## RNeXML	NA
## rngtools	NA
## robustbase	NA
## robustlmm	NA
## rockchalk	NA
## roptim	NA
## roxygen2	NA
## rpf	NA
## rr2	NA
## rrBLUP	NA
## rsconnect	NA
## Rsolnp	NA
## RSpectra	NA
## RSQLite	NA
## rstan	NA
## rstanarm	NA

## rstantools	NA
## rstatix	NA
## rstpm2	NA
## Rtsne	NA
## RUnit	NA
## rvcheck	NA
## rversions	NA
## rvest	NA
## Rvmmmin	NA
## Ryacas	NA
## s2	NA
## sandwich	NA
## sass	NA
## scales	NA
## scatterpie	NA
## scatterplot3d	NA
## segmented	NA
## selectr	NA
## sem	NA
## semEff	NA
## semPlot	NA
## seqinr	NA
## sessioninfo	NA
## setRNG	NA
## sf	NA
## shape	NA
## shiny	NA
## shinyBS	NA
## shinycssloaders	NA
## shinyjs	NA
## shinystan	NA
## shinythemes	NA
## sn	NA
## sna	NA
## snow	NA
## snowfall	NA
## soma	NA
## sourcetools	NA
## sp	NA
## spacetime	NA
## spam	NA
## SparseM	NA
## spData	NA
## spdep	NA
## splancs	NA
## SQUAREM	NA
## stabledist	NA
## StanHeaders	NA
## statespacer	NA
## statmod	NA
## statnet.common	NA
## subplex	NA
## SurvCorr	NA
## survey	NA

## svglite	NA
## sys	NA
## tcltk2	NA
## tensorflow	NA
## testDriveR	NA
## tfruns	NA
## TH.data	NA
## threejs	NA
## tidyr	NA
## tidyselect	NA
## tidyverse	NA
## timeDate	NA
## timereg	NA
## timeSeries	NA
## tkrplot	NA
## TMB	NA
## tmvnsim	NA
## tmvtnorm	NA
## transport	NA
## triangle	NA
## truncnorm	NA
## tweenr	NA
## ucminf	NA
## umap	NA
## units	NA
## unmarked	NA
## usethis	NA
## VCA	NA
## vegan	NA
## VGAM	NA
## vipor	NA
## viridis	NA
## viridisLite	NA
## visNetwork	NA
## webshot	NA
## whisker	NA
## whoami	NA
## wk	NA
## XML	NA
## xopen	NA
## xtable	NA
## xts	NA
## YieldCurve	NA
## zeallot	NA
## zipfR	NA
## zoo	NA
## base64enc	NA
## brio	NA
## cairoDevice	NA
## callr	NA
## cli	NA
## cpp11	NA
## crayon	NA
## curl	NA

## data.table	NA
## desc	NA
## diffobj	NA
## digest	NA
## ellipsis	NA
## evaluate	NA
## fansi	NA
## flextable	NA
## fontBitstreamVera	NA
## fontLiberation	NA
## fontquiver	NA
## freetypeharfbuzz	NA
## gdtools	NA
## glue	NA
## gmp	NA
## highr	NA
## htmltools	NA
## htmlwidgets	NA
## jsonlite	NA
## knitr	NA
## lifecycle	NA
## magrittr	NA
## markdown	NA
## mime	NA
## officer	NA
## pillar	NA
## pkgconfig	NA
## pkgload	NA
## praise	NA
## processx	NA
## ps	NA
## R6	NA
## Rcpp	NA
## rematch2	NA
## rJava	NA
## rjson	NA
## rJython	NA
## rlang	NA
## rmarkdown	NA
## Rmpfr	NA
## rprojroot	NA
## rstudioapi	NA
## rSymPy	NA
## stringi	NA
## stringr	NA
## systemfonts	NA
## testthat	NA
## tibble	NA
## tinytex	NA
## utf8	NA
## uuid	NA
## V8	NA
## vctrs	NA
## waldo	NA

## withr	NA
## xfun	NA
## xml2	NA
## yaml	NA
## zip	NA
## base	"base"
## boot	"recommended"
## class	"recommended"
## cluster	"recommended"
## codetools	"recommended"
## compiler	"base"
## datasets	"base"
## foreign	"recommended"
## graphics	"base"
## grDevices	"base"
## grid	"base"
## KernSmooth	"recommended"
## lattice	"recommended"
## MASS	"recommended"
## Matrix	"recommended"
## methods	"base"
## mgcv	"recommended"
## nlme	"recommended"
## nnet	"recommended"
## parallel	"base"
## rpart	"recommended"
## spatial	"recommended"
## splines	"base"
## stats	"base"
## stats4	"base"
## survival	"recommended"
## tcltk	"base"
## tools	"base"
## utils	"base"
##	Depends
## abind	"R (>= 1.5.0)"
## ade4	"R (>= 2.10)"
## adegenet	"R (>= 2.14), methods, ade4"
## ADGofTest	NA
## afex	"R (>= 3.5.0), lme4 (>= 1.1-8)"
## AICcmodavg	"R (>= 3.2.0)"
## AlphaBeta	"R (>= 3.6.0)"
## ape	"R (>= 3.2.0)"
## arm	"R (>= 3.1.0), MASS, Matrix (>= 1.0), stats, lme4 (>= 1.0)"
## askpass	NA
## assertthat	NA
## backports	"R (>= 3.0.0)"
## bayesplot	"R (>= 3.1.0)"
## BB	"R (>= 2.6.1)"
## bbmle	"R (>= 3.0.0), stats4"
## BCEA	"R (>= 2.10)"
## bdsmatrix	"methods, R (>= 2.0.0)"
## beeswarm	NA
## benchmarkme	"R (>= 3.5.0)"



```

## benchmarkmeData "R (>= 3.5.0)"
## BH NA
## Biobase "R (>= 2.10), BiocGenerics (>= 0.27.1), utils"
## BiocGenerics "R (>= 4.0.0), methods, utils, graphics, stats, parallel"
## BiocManager NA
## BiocParallel "methods"
## BiocVersion "R (>= 4.1.0)"
## bit "R (>= 2.9.2)"
## bit64 "R (>= 3.0.1), bit (>= 4.0.0), utils, methods, stats"
## blob NA
## Bolstad2 NA
## bookdown NA
## brew NA
## bridgesampling "R (>= 3.0.0)"
## brms "R (>= 3.5.0), Rcpp (>= 0.12.0), methods"
## Brodningnag "R (>= 2.13.0), methods"
## broom "R (>= 3.1)"
## bslib "R (>= 2.10)"
## cachem NA
## car "R (>= 3.5.0), carData (>= 3.0-0)"
## caracas "R (>= 3.0), methods"
## carData "R (>= 3.5.0)"
## caret "R (>= 3.2.0), lattice (>= 0.20), ggplot2"
## ccccd "igraph"
## cellranger "R (>= 3.0.0)"
## checkmate "R (>= 3.0.0)"
## classInt "R (>= 2.2)"
## cli "R (>= 2.10)"
## clipr NA
## clisymbols NA
## clusterPower NA
## coda "R (>= 2.14.0)"
## coin "R (>= 3.6.0), survival"
## colorspace "R (>= 3.0.0), methods"
## colourpicker "R (>= 3.1.0)"
## combinat NA
## commonmark NA
## config NA
## conquer "R (>= 3.5.0)"
## contfrac NA
## copula "R (>= 3.5.0)"
## coRanking NA
## corpcor "R (>= 3.0.2)"
## corrplot NA
## covr "R (>= 3.1.0), methods"
## cowplot "R (>= 3.5.0)"
## crancache NA
## cranlike NA
## credentials NA
## crosstalk NA
## CRTSize "R (>= 2.01)"
## cubature NA
## curl "R (>= 3.0.0)"
## CVST "kernlab,Matrix"

```

```

## DAAG "R (>= 2.10.0), lattice"
## DBI "methods, R (>= 3.0.0)"
## dbplyr "R (>= 3.1)"
## debugme NA
## deldir "R (>= 3.5.0)"
## DEoptimR NA
## Deriv NA
## deSolve "R (>= 3.3.0)"
## devtools "R (>= 3.0.2), usethis (>= 2.0.1)"
## dfoptim "R (>= 2.10.1)"
## DHARMA "R (>= 3.0.2)"
## diagram "R (>= 2.01), shape"
## diffusionMap "R (>= 2.10)"
## dimRed "R (>= 3.0.0), DRR"
## doParallel "R (>= 2.14.0), foreach(>= 1.2.0), iterators(>= 1.0.0),\nparallel, utils"
## dotCall64 "R (>= 3.1)"
## dplyr "R (>= 3.3.0)"
## DRR "kernlab, CVST, Matrix"
## DT NA
## dtplyr "R (>= 3.3)"
## dygraphs "R (>= 3.0)"
## e1071 NA
## effects "R (>= 3.5.0), carData"
## eha "R (>= 3.5.0)"
## ellipse "R (>= 2.0.0),graphics,stats"
## elliptic "R (>= 2.5.0)"
## emdbook NA
## emmeans "R (>= 3.5.0)"
## energy "R (>= 2.10)"
## epiphy "R (>= 2.15.1)"
## estimability "stats"
## expm "Matrix"
## ez "R (>= 3.1)"
## ezsim NA
## farver NA
## fastGHQuad "Rcpp (>= 0.11.0)"
## fastICA "R (>= 3.0.0)"
## fastmap NA
## fastmatch NA
## fBasics "R (>= 2.15.1), timeDate, timeSeries"
## fdrtool "R (>= 3.0.2)"
## fields "R (>= 3.0), methods, spam, viridis"
## fitODBOD "R (>= 3.5.0)"
## flexsurv "survival, R (>= 2.15.0)"
## FNN "R (>= 3.0.0)"
## fOptions "timeDate, timeSeries, fBasics"
## forcats "R (>= 3.2)"
## foreach "R (>= 2.5.0)"
## formatR "R (>= 3.2.3)"
## Formula "R (>= 2.0.0), stats"
## freetypeharfbuzz "R (>= 3.2)"
## fs "R (>= 3.1)"
## futile.logger "R (>= 3.0.0)"
## futile.options "R (>= 2.8.0)"

```

```

## future                NA
## future.apply          "R (>= 3.2.0), future (>= 1.17.0)"
## GA                    "R (>= 3.4), methods, foreach, iterators"
## gamlss                "R (>= 3.3.0), graphics, stats, splines, utils, grDevices, \ngamlss.data (>= 5.0-0)"
## gamlss.data           "R (>= 3.5.0)"
## gamlss.dist           "R (>= 2.15.0), MASS, graphics, stats, methods, grDevices"
## gamm4                 "R (>= 2.9.0), methods, Matrix, lme4 (>= 1.0), mgcv (>= 1.7-23)"
## gap                   "R (>= 2.10)"
## gargle                "R (>= 3.3)"
## gdata                 "R (>= 2.3.0)"
## geepack               "R (>= 3.5.0), methods"
## generics              "R (>= 3.1)"
## GenSA                 "R (>= 2.12.0)"
## geoR                  "R (>= 2.10), stats, methods"
## gert                  NA
## ggbeeswarm            "R (>= 3.0.0), ggplot2 (>= 2.0)"
## ggforce               "ggplot2 (>= 3.0.0), R (>= 3.3.0)"
## ggplot2               "R (>= 3.2)"
## ggpol                 "ggplot2 (>= 3.3.0), R (>= 3.4.0)"
## ggpubr                "R (>= 3.1.0), ggplot2"
## ggrepel               "R (>= 3.0.0), ggplot2 (>= 2.2.0)"
## ggResidpanel          "R (>= 3.0.0)"
## gggridges             "R (>= 3.2)"
## ggsci                 "R (>= 3.0.2)"
## ggsignif              NA
## gh                    NA
## ghyp                  "R(>= 2.7), methods, numDeriv, graphics, stats, MASS"
## gitcreds              NA
## glasso                NA
## glmmTMB               "R (>= 3.2.0)"
## glmnet                "R (>= 3.6.0), Matrix (>= 1.0-6)"
## globals               "R (>= 3.1.2)"
## gmailr                "R (>= 3.0.0)"
## gmm                   "R (>= 2.10.0), sandwich"
## gmodels               "R (>= 1.9.0)"
## googledrive           "R (>= 3.2)"
## googlesheets4         "R (>= 3.2)"
## gower                NA
## graphicalVAR          "R (>= 3.1.0)"
## gridBase              "R (>= 2.3.0)"
## gridExtra            NA
## gsl                   "R (>= 3.1.0)"
## gss                   "R (>= 3.0.0), stats"
## gstat                 "R (>= 2.10)"
## gtable                "R (>= 3.0)"
## gtools                "methods, stats, utils"
## haplotypes            NA
## haven                 "R (>= 3.2)"
## heemod                "R (>= 3.3.0)"
## here                  NA
## Hmisc                 "lattice, survival (>= 3.1-6), Formula, ggplot2 (>= 2.2)"
## hms                   NA
## HSAUR3                "R (>= 3.0.0), tools"
## htmlTable             NA

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```

## httpuv          "R (>= 2.15.1)"
## httr            "R (>= 3.2)"
## hypergeo        "R (>= 3.1.0),"
## ids             NA
## igraph          "methods"
## ini             NA
## inline          NA
## insight         "R (>= 3.4)"
## intervals       "R (>= 2.9.0)"
## ipred           "R (>= 2.10)"
## lSimgSampler    "Rcpp (>= 0.10.4), R (>= 3.0.0)"
## ISLR            "R (>= 2.10)"
## isoband         NA
## iterators       "R (>= 2.5.0), utils"
## Jmisc           NA
## jpeg            "R (>= 2.9.0)"
## jquerylib       NA
## jtools          "R (>= 2.10)"
## kableExtra      "R (>= 3.1.0)"
## keras           "R (>= 3.2)"
## kernlab         "R (>= 2.10)"
## kutils          "R (>= 3.3.0)"
## labeling        NA
## lambda.r        "R (>= 3.0.0)"
## languageR       "R(>= 3.0.2)"
## later           NA
## latticeExtra    "R (>= 3.6.0), lattice"
## lava            "R (>= 3.0)"
## lavaan          "R(>= 3.4)"
## lavaSearch2     "R (>= 2.10), ggplot2, lava (>= 1.6.4)"
## lazyeval        "R (>= 3.1.0)"
## lbfgs           NA
## lbfgsb3c        "R (>= 3.0.2)"
## LearnBayes      NA
## libcoin         "R (>= 3.4.0)"
## lisrelToR       "R (>= 2.15.0)"
## listenv         "R (>= 3.1.2)"
## lle            "scatterplot3d, MASS, snowfall"
## lme4            "R (>= 3.2.0), Matrix (>= 1.2-1), methods, stats"
## lmerTest        "R (>= 3.2.5), lme4 (>= 1.1-10), stats, methods"
## lmtest          "R (>= 3.0.0), stats, zoo"
## loe            "R (>= 3.2.3), MASS"
## logitnorm       ""
## loo            "R (>= 3.1.2)"
## lpSolve         NA
## lubridate       "methods, R (>= 3.2)"
## manipulateWidget "R (>= 2.10)"
## maps           "R (>= 3.0.0)"
## maptools        "R (>= 2.10), sp (>= 1.0-11)"
## MASS           "R (>= 3.3.0), grDevices, graphics, stats, utils"
## mathjaxr        NA
## matrixcalc      "R (>= 2.0.1)"
## MatrixModels    "R (>= 3.0.1)"
## matrixStats     "R (>= 2.12.0)"

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```

## memoise          NA
## MEMSS            "R(>= 2.12.0), lme4 (>= 0.999375-36)"
## metaSEM          "R (>= 3.4.0), OpenMx"
## mets             "R (>= 3.5), timereg (>= 1.9.4), lava (>= 1.6.6)"
## mi               "R (>= 3.0.0), methods, Matrix, stats4"
## microbenchmark   NA
## miniUI           NA
## minpack.lm       NA
## minqa            NA
## mitools          NA
## mixmeta          "R (>= 3.5.0)"
## mlmRev           "lme4, R (>= 2.10)"
## mnormt           "R (>= 2.2.0)"
## ModelMetrics     "R (>= 3.2.2)"
## modelr           "R (>= 3.2)"
## modeltools       "stats, stats4"
## moments          NA
## msm              NA
## mstate           "survival (>= 3.1)"
## muhaz            "R(>= 2.3)"
## multcomp         "stats, graphics, mvtnorm (>= 1.0-10), survival (>= 2.39-4),\nTH.data (>= 1.0-2)"
## MuMIn            "R (>= 3.5.0)"
## munsell          NA
## mvmeta           "R (>= 2.13.0)"
## mvnfast          NA
## mvtnorm          "R(>= 3.5.0)"
## network          "R (>= 2.10), utils"
## NlcOptim         "MASS, R (>= 3.2.2)"
## nleqslv          NA
## nlrmrt           "R (>= 2.15.0)"
## nloptr           NA
## nlsalt           NA
## nlspkg           NA
## nlshr            "R (>= 3.0)"
## NMF              "R (>= 3.0.0), methods, utils, pkgmaker (>= 0.20), registry,\nrrngtools (>= 1.2.3),
## numDeriv         "R (>= 2.11.1)"
## OpenMx           "R (>= 3.5.0)"
## openssl          NA
## openxlsx         "R (>= 3.3.0)"
## optextras        NA
## optimx           NA
## ore              NA
## packrat          "R (>= 3.0.0)"
## pander           "R (>= 2.15.0)"
## parallelly       NA
## parfm            "R (>= 2.10), survival, optimx"
## parsedate        NA
## pbapply          "R (>= 3.2.0)"
## pbivnorm         NA
## pbkrtest         "R (>= 3.5.0), lme4 (>= 1.1.10)"
## pbmcapply        "utils, parallel"
## pbv              "R (>= 3.1)"
## pcaL1            NA
## pcaPP            NA

```

```

## pegas "R (>= 3.2.0), ape (>= 5.3-11)"
## permute "R (>= 2.14.0)"
## phangorn "ape (>= 5.5), R (>= 3.6.0)"
## phylobase NA
## phylolm "R (>= 4.0), ape"
## pixmap NA
## pkgbuild "R (>= 3.1)"
## pkgmaker "R (>= 3.0.0), methods, stats, registry"
## PKPDmodels "R(>= 2.13.0)"
## plogr NA
## plotly "R (>= 3.2.0), ggplot2 (>= 3.0.0)"
## plotrix "R (>= 3.5.0)"
## plyr "R (>= 3.1.0)"
## png "R (>= 2.9.0)"
## polyspline NA
## polyclip "R (>= 3.0.0)"
## polycor "R (>= 3.3.0)"
## polynom NA
## prettydoc NA
## prettyunits NA
## pROC "R (>= 2.14)"
## proclim "R (>= 2.9.0)"
## progress NA
## projpred "R (>= 3.5.0)"
## promises NA
## proxy "R (>= 3.4.0)"
## pryr "R (>= 3.1.0)"
## pso "R (>= 2.10.0), methods"
## pspline "R (>= 2.0.0), stats, graphics"
## psych NA
## psychTools "R(>= 2.10)"
## purrr "R (>= 3.2)"
## qgam "R (>= 3.5.0), mgcv (>= 1.8-28)"
## qgraph "R (>= 3.0.0)"
## qqplotr "R (>= 3.1), ggplot2 (>= 2.2)"
## qra "R (>= 3.5.0), lattice"
## quadprog "R (>= 3.1.0)"
## quantreg "R (>= 2.6), stats, SparseM"
## R.cache "R (>= 2.14.0)"
## R.methodsS3 "R (>= 2.13.0)"
## R.oo "R (>= 2.13.0), R.methodsS3 (>= 1.8.0)"
## R.rsp "R (>= 2.14.0)"
## R.utils "R (>= 2.14.0), R.oo (>= 1.23.0)"
## RandomFields "R (>= 3.5.0), sp, RandomFieldsUtils (>= 0.5.1)"
## RandomFieldsUtils "R (>= 3.0)"
## RANN NA
## rappdirs "R (>= 3.2)"
## raster "sp (>= 1.4.1), R (>= 3.4.0)"
## rbibutils "R (>= 2.10)"
## Rcgmin NA
## rcmdcheck NA
## RColorBrewer "R (>= 2.0.0)"
## RcppArmadillo "R (>= 3.3.0)"
## RcppEigen NA

```

```

## RcppFaddeeva      NA
## RcppGSL           NA
## RcppParallel      "R (>= 3.0.2)"
## RcppZiggurat      "R (>= 3.0.0)"
## Rdpack            "R (>= 2.15.0), methods"
## readr             "R (>= 3.1)"
## readxl            NA
## recipes           "R (>= 3.1), dplyr"
## registry          "R (>= 2.6.0)"
## regsem            "lavaan, Rcpp, Rsolnp"
## rematch           NA
## remotes           "R (>= 3.0.0)"
## reportr           NA
## reprex            "R (>= 3.3)"
## reshape           "R (>= 2.6.1)"
## reshape2          "R (>= 3.1)"
## reticulate         "R (>= 3.0)"
## revdepcheck        NA
## rex               NA
## Rfast             "R (>= 3.5.0), Rcpp (>= 0.12.3), RcppZiggurat"
## rgeos             "R (>= 3.3.0), methods, sp (>= 1.1-0)"
## rggho             "R (>= 3.2.2)"
## rgl               "R (>= 3.3.0)"
## rio               "R (>= 2.15.0)"
## rms               "R (>= 3.5.0), Hmisc (>= 4.3-0), survival (>= 3.1-12), lattice,\nggplot2 (>= 2.2),
## rncl              "R (>= 3.1.1)"
## RNeXML            "R (>= 3.0.0), ape (>= 3.1), methods (>= 3.0.0)"
## rngtools          "R (>= 3.2.0), methods"
## robustbase        "R (>= 3.5.0)"
## robustlmm         "lme4 (>= 1.1-9), Matrix (>= 1.0-13), R (>= 3.2.0)"
## rockchalk         "R (>= 2.10)"
## roptim            NA
## roxygen2          "R (>= 3.2)"
## rpf               "methods, parallel, R (>= 2.14.0)"
## rr2               "R (>= 3.0), stats"
## rrBLUP            "R (>= 2.14)"
## rsconnect         "R (>= 3.0.0)"
## Rsolnp            "R (>= 2.10.0)"
## RSpectra          "R (>= 3.0.2)"
## RSQLite           "R (>= 3.1.0)"
## rstan             "R (>= 3.4.0), StanHeaders (>= 2.21.0), ggplot2 (>= 3.0.0)"
## rstanarm          "R (>= 3.4.0), Rcpp (>= 0.12.0), methods"
## rstantools        NA
## rstatix           "R (>= 3.3.0)"
## rstpm2            "R (>= 3.0.2), methods, survival, splines"
## Rtsne             NA
## RUnit             "R (>= 2.5.0), utils (>= 2.5.0), methods (>= 2.5.0), graphics\n(>= 2.5.0)"
## rvcheck           "R (>= 3.4.0)"
## rversions         NA
## rvest             "R (>= 3.2)"
## Rvmmmin           NA
## Ryacas            "R (>= 3.3.0)"
## s2                "R (>= 3.0.0)"
## sandwich          "R (>= 3.0.0)"

```

```

## sass NA
## scales "R (>= 3.2)"
## scatterpie "R (>= 3.4.0), ggplot2"
## scatterplot3d "R (>= 2.7.0)"
## segmented NA
## selectr "R (>= 3.0)"
## sem "R (>= 3.5.0), stats"
## semEff "R (>= 3.6.0)"
## semPlot "R (>= 2.15.0)"
## seqinr "R (>= 2.10.0)"
## sessioninfo NA
## setRNG "R (>= 2.5.0)"
## sf "methods, R (>= 3.3.0)"
## shape "R (>= 2.01)"
## shiny "R (>= 3.0.2), methods"
## shinyBS NA
## shinycssloaders "R (>= 3.1)"
## shinyjs "R (>= 3.1.0)"
## shinystan "R (>= 3.1.0), shiny (>= 1.0.3)"
## shinythemes "R (>= 3.0.0)"
## sn "R (>= 3.0.0), methods, stats4"
## sna "R (>= 2.0.0), utils, statnet.common, network"
## snow "R (>= 2.13.1), utils"
## snowfall "R (>= 2.10), snow"
## soma "R (>= 2.5.0)"
## sourcetools "R (>= 3.0.2)"
## sp "R (>= 3.0.0), methods"
## spacetime "R (>= 3.0.0)"
## spam "R (>= 3.1), dotCall64, grid, methods"
## SparseM "R (>= 2.15), methods"
## spData "R (>= 3.3.0)"
## spdep "R (>= 3.3.0), methods, sp (>= 1.0), spData (>= 0.2.6.0), sf"
## splancs "R (>= 2.10.0), sp (>= 0.9)"
## SQUAREM "R (>= 3.0)"
## stabledist "R (>= 3.1.0)"
## StanHeaders "R (>= 3.4.0)"
## statespacer "R (>= 3.6)"
## statmod "R (>= 3.0.0)"
## statnet.common "R (>= 3.5)"
## subplex "R(>= 2.5.1)"
## SurvCorr "R (>= 3.0.2)"
## survey "R (>= 3.1.0), grid, methods, Matrix, survival"
## svglite "R (>= 3.0.0)"
## sys NA
## tcltk2 "R (>= 2.8.0), tcltk"
## tensorflow "R (>= 3.1)"
## testDriveR NA
## tfruns "R (>= 3.1)"
## TH.data "R (>= 2.10.0), survival, MASS"
## threejs "R (>= 3.0.0), igraph (>= 1.0.0)"
## tidyr "R (>= 3.1)"
## tidyselect "R (>= 3.2)"
## tidyverse "R (>= 3.3)"
## timeDate "R (>= 2.15.1), graphics, utils, stats, methods"

```



```

## timereg      "R (>= 2.15), survival"
## timeSeries   "R (>= 2.10), graphics, grDevices, stats, methods, utils,\ntimeDate (>= 2150.95)"
## tkrplot      "R (>= 2.13), grDevices, tcltk"
## TMB          "R (>= 3.0.0)"
## tmvnsim      NA
## tmvtnorm     "R (>= 1.9.0), mvtnorm, utils, Matrix, stats4, gmm"
## transport    "R (>= 3.0.0)"
## triangle     "R (>= 2.14.1)"
## truncnorm    "R (>= 3.4.0)"
## tweenr       "R (>= 3.2.0)"
## ucminf       NA
## umap         "R (>= 3.1.2)"
## units        "R (>= 3.0.2)"
## unmarked     "R (>= 2.12.0), methods, lattice"
## usethis      "R (>= 3.2)"
## VCA          "R (>= 3.0.0)"
## vegan        "permute (>= 0.9-0), lattice, R (>= 3.4.0)"
## VGAM         "R (>= 3.5.0), methods, stats, stats4, splines"
## vipor        "R (>= 3.0.0)"
## viridis      "R (>= 2.10), viridisLite (>= 0.4.0)"
## viridisLite  "R (>= 2.10)"
## visNetwork   "R (>= 3.0)"
## webshot      "R (>= 3.0)"
## whisker      NA
## whoami       NA
## wk           NA
## XML          "R (>= 4.0.0), methods, utils"
## xopen        "R (>= 3.1)"
## xtable       "R (>= 2.10.0)"
## xts          "zoo (>= 1.7-12)"
## YieldCurve   "R (>= 2.10), xts"
## zeallot      NA
## zipfR        "R (>= 3.0.0)"
## zoo          "R (>= 3.1.0), stats"
## base64enc    "R (>= 2.9.0)"
## brio         NA
## cairoDevice  "R (>= 2.12.0)"
## callr        NA
## cli          "R (>= 2.10)"
## cpp11        NA
## crayon       NA
## curl         "R (>= 3.0.0)"
## data.table   "R (>= 3.1.0)"
## desc         "R (>= 3.1.0)"
## diffobj      "R (>= 3.1.0)"
## digest       "R (>= 3.3.0)"
## ellipsis     "R (>= 3.2)"
## evaluate     "R (>= 3.0.2)"
## fansi        "R (>= 3.1.0)"
## flextable    NA
## fontBitstreamVera "R (>= 3.0.0)"
## fontLiberation "R (>= 3.0)"
## fontquiver   "R (>= 3.0.0)"
## freetypeharfbuzz "R (>= 3.2)"

```

## gdtools	NA
## glue	"R (>= 3.2)"
## gmp	"R (>= 3.5.0)"
## highr	"R (>= 3.2.3)"
## htmltools	"R (>= 2.14.1)"
## htmlwidgets	NA
## jsonlite	"methods"
## knitr	"R (>= 3.2.3)"
## lifecycle	"R (>= 3.3)"
## magrittr	NA
## markdown	"R (>= 2.11.1)"
## mime	NA
## officer	NA
## pillar	NA
## pkgconfig	NA
## pkgload	NA
## praise	NA
## processx	NA
## ps	"R (>= 3.1)"
## R6	"R (>= 3.0)"
## Rcpp	NA
## rematch2	NA
## rJava	"R (>= 3.6.0), methods"
## rjson	"R (>= 3.1.0)"
## rJython	"rJava (>= 0.8-1), rjson (>= 0.1.9)"
## rlang	"R (>= 3.3.0)"
## rmarkdown	"R (>= 3.0)"
## Rmpfr	"gmp (>= 0.6-1), R (>= 3.5.0)"
## rprojroot	"R (>= 3.0.0)"
## rstudioapi	NA
## rSymPy	"rJython"
## stringi	"R (>= 3.1)"
## stringr	"R (>= 3.1)"
## systemfonts	"R (>= 3.2.0)"
## testthat	"R (>= 3.1)"
## tibble	"R (>= 3.1.0)"
## tinytex	NA
## utf8	"R (>= 2.10)"
## uuid	"R (>= 2.9.0)"
## V8	NA
## vctrs	"R (>= 3.3)"
## waldo	NA
## withr	"R (>= 3.2.0)"
## xfun	NA
## xml2	"R (>= 3.1.0)"
## yaml	NA
## zip	NA
## base	NA
## boot	"R (>= 3.0.0), graphics, stats"
## class	"R (>= 3.0.0), stats, utils"
## cluster	"R (>= 3.4.0)"
## codetools	"R (>= 2.1)"
## compiler	NA
## datasets	NA

```

## foreign          "R (>= 4.0.0)"
## graphics         NA
## grDevices        NA
## grid             NA
## KernSmooth       "R (>= 2.5.0), stats"
## lattice          "R (>= 3.0.0)"
## MASS             "R (>= 3.3.0), grDevices, graphics, stats, utils"
## Matrix           "R (>= 3.5.0)"
## methods          NA
## mgcv             "R (>= 3.6.0), nlme (>= 3.1-64)"
## nlme             "R (>= 3.4.0)"
## nnet            "R (>= 3.0.0), stats, utils"
## parallel         NA
## rpart            "R (>= 2.15.0), graphics, stats, grDevices"
## spatial          "R (>= 3.0.0), graphics, stats, utils"
## splines          NA
## stats            NA
## stats4           NA
## survival         "R (>= 3.5.0)"
## tcltk            NA
## tools            NA
## utils            NA
## Imports
## abind            "methods, utils"
## ade4             "graphics, grDevices, methods, stats, utils, MASS, pixmap, sp,\nprogress"
## adegenet         "utils, stats, grDevices, MASS, igraph, ape, shiny, ggplot2,\nseqlinr, parallel, sp"
## ADGofTest        NA
## afex            "pbkrtest (>= 0.4-1), lmerTest (>= 3.0-0), car, reshape2,\nstats, methods, utils"
## AICcmodavg       "methods, stats, graphics, lattice, MASS, Matrix, nlme, stats4,\nnsurvival, unmarked"
## AlphaBeta        "dplyr (>= 0.7), data.table (>= 1.10), stringr (>= 1.3), utils\n(>= 3.6.0), gtools"
## ape             "nlme, lattice, graphics, methods, stats, tools, utils,\nparallel, Rcpp (>= 0.12.0)"
## arm             "abind, coda, graphics, grDevices, Hmisc, methods, nlme, utils"
## askpass          "sys (>= 2.1)"
## assertthat       "tools"
## backports        NA
## bayesplot        "dplyr (>= 0.8.0), ggplot2 (>= 3.0.0), ggridges, glue,\nreshape2, rlang (>= 0.3.0)"
## BB              "stats, quadprog"
## bbmle           "stats, numDeriv, lattice, MASS, methods, bdsmatrix, Matrix,\nmmvtnorm"
## BCEA            "MASS, dplyr, rlang"
## bdsmatrix        NA
## beeswarm         "stats, graphics, grDevices, utils"
## benchmarkme      "benchmarkmeData (>= 1.0.4), compiler, doParallel, dplyr,\nforeach, graphics, http"
## benchmarkmeData "dplyr, graphics, tibble, utils"
## BH              NA
## Biobase          "methods"
## BiocGenerics     "methods, utils, graphics, stats, parallel"
## BiocManager      "utils"
## BiocParallel     "stats, utils, futile.logger, parallel, snow"
## BiocVersion      NA
## bit             NA
## bit64           NA
## blob            "methods, rlang, vctrs (>= 0.2.1)"
## Bolstad2         NA
## bookdown         "htmltools (>= 0.3.6), knitr (>= 1.22), rmarkdown (>= 2.6),\nxfun (>= 0.22), tinyt"

```

```

## brew NA
## bridgesampling "mvtnorm, Matrix, Brobdingnag, stringr, coda, parallel, scales,\nutils, methods"
## brms "rstan (>= 2.19.2), ggplot2 (>= 2.0.0), loo (>= 2.3.1), Matrix\n(>= 1.1.1), mgcv (
## Brobdingnag NA
## broom "backports, dplyr (>= 1.0.0), ellipsis, generics (>= 0.0.2),\n glue, methods, purrr
## bslib "grDevices, htmltools (>= 0.5.1), jsonlite, sass (>= 0.4.0),\njquerylib (>= 0.1.3)
## cachem "rlang, fastmap"
## car "abind, MASS, mgcv, nnet, pbkrtest (>= 0.4-4), quantreg,\ngrDevices, utils, stats,
## caracas "reticulate (>= 1.14), magrittr"
## carData NA
## caret "foreach, methods, plyr, ModelMetrics (>= 1.2.2.2), nlme,\nreshape2, stats, stats4
## cccd "proxy, deldir, FNN"
## cellranger "rematch, tibble"
## checkmate "backports (>= 1.1.0), utils"
## classInt "grDevices, stats, graphics, e1071, class, KernSmooth"
## cli "glue, utils"
## clipr "utils"
## clisymbols NA
## clusterPower "lme4 (>= 1.0), progress (>= 1.1.2), dplyr(>= 0.7.5), tidyr (>=\n0.8.1), R.utils (
## coda "lattice"
## coin "methods, parallel, stats, stats4, utils, libcoin (>= 1.0-5),\nmatrixStats (>= 0.5
## colorspace "graphics, grDevices, stats"
## colourpicker "ggplot2, htmltools, htmlwidgets (>= 0.7), jsonlite, miniUI (>=\n0.1.1), shiny (>=
## combinat NA
## commonmark NA
## config "yaml (>= 2.1.19)"
## conquer "Rcpp (>= 1.0.3), Matrix, matrixStats, stats"
## contfrac NA
## copula "stats, graphics, methods, stats4, Matrix, lattice, colorspace,\ngsl, ADGofTest, s
## coRanking "methods, graphics, stats"
## corpcor "stats"
## corrplot NA
## covr "digest, stats, utils, jsonlite, rex, http, crayon, withr (>=\n1.0.2), yaml"
## cowplot "ggplot2 (> 2.2.1), grid, gtable, grDevices, methods, rlang,\n scales"
## crancache "callr, cranlike (>= 1.0.2), curl, desc (>= 1.1.0), digest,\nparsedate, rappdirs,
## cranlike "DBI, debugme, desc (>= 1.1.0), RSQLite, tools, utils"
## credentials "openssl (>= 1.3), sys (>= 2.1), curl, jsonlite, askpass"
## crosstalk "htmltools (>= 0.3.6), jsonlite, lazyeval, R6"
## CRTSize NA
## cubature "Rcpp"
## curl NA
## CVST NA
## DAAG "latticeExtra, methods"
## DBI NA
## dbplyr "assertthat (>= 0.2.0), blob (>= 1.2.0), DBI (>= 1.0.0), dplyr\n(>= 1.0.4), ellipsis
## debugme "crayon, grDevices"
## deldir "graphics, grDevices"
## DEoptimR "stats"
## Deriv "methods"
## deSolve "methods, graphics, grDevices, stats"
## devtools "callr (>= 3.6.0), cli (>= 2.4.0), desc (>= 1.3.0), ellipsis\n(>= 0.3.1), fs (>= 1
## dfoptim NA
## DHARMA "stats, graphics, utils, grDevices, parallel, doParallel,\nforeach, gap, lmtest, ap
## diagram "stats, graphics"

```

```

## diffusionMap      "scatterplot3d, graphics, igraph, Matrix, stats"
## dimRed            "magrittr, methods"
## doParallel        NA
## dotCall64         NA
## dplyr             "ellipsis, generics, glue (>= 1.3.2), lifecycle (>= 1.0.0), \nmagrittr (>= 1.5), me
## DRR               "stats, methods"
## DT               "htmltools (>= 0.3.6), htmlwidgets (>= 1.3), jsonlite (>=\n0.9.16), magrittr, cross
## dtplyr           "crayon, data.table (>= 1.12.4), dplyr (>= 1.0.3), ellipsis, \nglue, lifecycle, rlang
## dygraphs         "magrittr, htmlwidgets (>= 0.6), htmltools (>= 0.3.5), zoo (>=\n1.7-10), xts (>= 0
## e1071            "graphics, grDevices, class, stats, methods, utils, proxy"
## effects          "lme4, nnet, lattice, grid, colorspace, graphics, grDevices, \nstats, survey, utils
## eha              "stats, graphics, survival (>= 3.0)"
## ellipse          NA
## elliptic         "MASS"
## emdbook          "MASS, lattice, plyr, coda, bbmle"
## emmeans          "estimability (>= 1.3), graphics, methods, numDeriv, stats, \nutils, plyr, mvtnorm,
## energy           "Rcpp (>= 0.12.6), stats, boot, gsl"
## epiphy           "stats, methods, utils, grDevices, ggplot2, transport, msm, \nnpbapply, Rcpp"
## estimability     NA
## expm             "methods"
## ez               "car (>= 2.1-3), ggplot2 (>= 2.1.0), lme4 (>= 1.1-12), MASS (>=\n7.3-45), Matrix (
## ezsim            "foreach, ggplot2, parallel, digest, plyr, reshape, Jmisc"
## farver           NA
## fastGHQuad       NA
## fastICA          NA
## fastmap          NA
## fastmatch        NA
## fBasics          "stats, grDevices, graphics, methods, utils, MASS, spatial, \ngss, stabledist"
## fdrtool          "graphics, grDevices, stats"
## fields           "maps"
## fitODBOD         "hypergeo, stats, bbmle"
## flexsurv         "assertthat, deSolve, generics, magrittr, mstate (>= 0.2.10), \nMatrix, muhaz, mvtn
## FNN              NA
## fOptions         "graphics, methods, stats"
## forcats          "ellipsis, magrittr, rlang, tibble"
## foreach          "codetools, utils, iterators"
## formatR          NA
## Formula          NA
## freetypeharfbuzz "fontquiver"
## fs               "methods"
## futile.logger    "utils, lambda.r (>= 1.1.0), futile.options"
## futile.options   NA
## future           "digest, globals (>= 0.13.1), listenv (>= 0.8.0), parallel, \nparallelly (>= 1.21.0
## future.apply     "globals (>= 0.12.5), parallel, utils"
## GA              "stats, graphics, grDevices, utils, cli, crayon, Rcpp"
## gamlss           "MASS, survival, methods"
## gamlss.data      NA
## gamlss.dist      NA
## gamm4            NA
## gap              NA
## gargle           "cli (>= 2.3.1), fs (>= 1.3.1), glue (>= 1.3.0), httr (>=\n1.4.0), jsonlite, rappd
## gdata            "gtools, stats, methods, utils"
## geepack          "MASS, broom, magrittr"
## generics         "methods"

```

```

## GenSA NA
## geoR "MASS, sp, splancs, RandomFields, graphics"
## gert "askpass, credentials (>= 1.2.1), openssl (>= 1.4.1),\nrstudioapi (>= 0.11), sys, :
## ggbeeswarm "beeswarm, vipor"
## ggforce "Rcpp (>= 0.12.2), grid, scales, MASS, tweenr (>= 0.1.5),\ngtable, rlang, polyclip
## ggplot2 "digest, glue, grDevices, grid, gtable (>= 0.1.1), isoband,\nMASS, mgcv, rlang (>=
## ggpol "grid, gtable, grDevices, plyr, rlang, dplyr, tibble, glue"
## ggpubr "ggrepel, grid, ggsci, stats, utils, tidyr, purrr, dplyr (>=\n0.7.1), cowplot, ggs
## ggrepel "grid, Rcpp, rlang (>= 0.3.0), scales (>= 0.5.0)"
## ggResidpanel "cowplot, ggplot2, grDevices, grid, MASS, plotly, qqplotr,\nstats, stringr"
## ggbridges "ggplot2 (>= 3.0.0), grid (>= 3.0.0), plyr (>= 1.8.0), scales\n(>= 0.4.1), withr (
## ggsci "grDevices, scales, ggplot2 (>= 2.0.0)"
## ggsignif "ggplot2 (>= 3.3.3)"
## gh "cli (>= 2.0.1), gitcreds, httr (>= 1.2), ini, jsonlite"
## ghyp NA
## gitcreds NA
## glasso NA
## glmmTMB "methods, TMB (>= 1.7.14), lme4 (>= 1.1-18.9000), Matrix, nlme"
## glmnet "methods, utils, foreach, shape, survival"
## globals "codetools"
## gmailr "base64enc, crayon, gargle, httr, jsonlite, lifecycle,\nmagrittr, mime, rematch2"
## gmm "stats, methods, grDevices, graphics"
## gmodels "MASS, gdata"
## googledrive "curl (>= 2.8.1), gargle (>= 0.3.1), glue (>= 1.2.0), httr,\njsonlite, magrittr, p
## googlesheets4 "cellranger, curl, gargle (>= 1.0.0), glue (>= 1.3.0),\ngoogledrive (>= 1.0.0), ht
## gower NA
## graphicalVAR "Rcpp (>= 0.11.3), Matrix, glasso, glmnet, mvtnorm, qgraph (>=\n1.3.1), dplyr, metl
## gridBase "graphics, grid"
## gridExtra "gtable, grid, grDevices, graphics, utils"
## gsl NA
## gss NA
## gstat "utils, stats, graphics, methods, lattice, sp (>= 0.9-72), zoo,\nspacetime (>= 1.0
## gtable "grid"
## gtools NA
## haplotypes "methods, stats, utils, network, sna, ape, phangorn,plotrix"
## haven "forcats (>= 0.2.0), hms, methods, readr (>= 0.1.0), rlang (>=\n0.4.0), tibble, tid
## heemod "dplyr (>= 0.7.2), ggplot2 (>= 2.2.0), lazyeval (>= 0.2.0),\nmemoise (>= 1.1.0), m
## here "rprojroot (>= 2.0.2)"
## Hmisc "methods, latticeExtra, cluster, rpart, nnet, foreign, gtable,\nnggrid, gridExtra, d
## hms "ellipsis (>= 0.3.2), lifecycle, methods, pkgconfig, rlang,\nvctr (>= 0.3.8)"
## HSAUR3 NA
## htmlTable "stringr, knitr (>= 1.6), magrittr (>= 1.5), methods,\ncheckmate, htmlwidgets, htm
## httpuv "Rcpp (>= 0.11.0), utils, R6, promises, later (>= 0.8.0)"
## httr "curl (>= 3.0.0), jsonlite, mime, openssl (>= 0.8), R6"
## hypergeo "elliptic (>= 1.3-5), contfrac (>= 1.1-9), deSolve"
## ids "openssl, uuid"
## igraph "graphics, grDevices, magrittr, Matrix, pkgconfig (>= 2.0.0),\nstats, utils"
## ini NA
## inline "methods"
## insight "methods, stats, utils"
## intervals "utils, graphics, methods"
## ipred "rpart (>= 3.1-8), MASS, survival, nnet, class, prodlim"
## lsimgsampler "plyr, magrittr, nnet, dplyr"
## ISLR NA

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## isoband "grid, utils"
## iterators NA
## Jmisc NA
## jpeg NA
## jquerylib "htmltools"
## jtools "crayon, generics, ggplot2 (>= 3.3.0), magrittr, pander,\npkgconfig, rlang (>= 0.3
## kableExtra "knitr (>= 1.16), magrittr, stringr (>= 1.0), xml2 (>= 1.1.1),\nrvest, rmarkdown (
## keras "generics (>= 0.0.1), reticulate (>= 1.10), tensorflow (>=\n2.0.0), tfruns (>= 1.0
## kernlab "methods, stats, grDevices, graphics"
## kutils "stats, utils, methods, foreign, xtable, plyr, openxlsx, RUnit"
## labeling "stats, graphics"
## lambda.r "formatR"
## languageR "methods"
## later "Rcpp (>= 0.12.9), rlang"
## latticeExtra "grid, stats, utils, grDevices, png, jpeg, RColorBrewer"
## lava "grDevices, graphics, methods, numDeriv, stats, survival,\nSQUAREM, utils"
## lavaan "methods, stats4, stats, utils, graphics, MASS, mnormt,\nnpbivnorm, numDeriv"
## lavaSearch2 "doParallel, MASS, Matrix, methods, multcomp, mvtnorm, nlme,\nparallel, Rcpp, resh
## lazyeval NA
## lbfgs "Rcpp (>= 0.11.2)"
## lbfgsb3c "Rcpp (>= 0.12.3), numDeriv, methods"
## LearnBayes NA
## libcoin "stats, mvtnorm"
## lisrelToR NA
## listenv NA
## lle NA
## lme4 "graphics, grid, splines, utils, parallel, MASS, lattice, boot,\nnlme (>= 3.1-123)
## lmerTest "numDeriv, MASS, ggplot2"
## lmtest "graphics"
## loe NA
## logitnorm NA
## loo "checkmate, matrixStats (>= 0.52), parallel, stats"
## lpSolve NA
## lubridate "generics, Rcpp (>= 0.12.13)"
## manipulateWidget "shiny (>= 1.0.3), miniUI, htmltools, htmlwidgets, knitr,\nmethods, tools, base64e
## maps "graphics, utils"
## maptools "foreign (>= 0.8), methods, grid, lattice, stats, utils,\ngrDevices"
## MASS "methods"
## mathjaxr NA
## matrixcalc NA
## MatrixModels "stats, methods, Matrix (>= 1.1-5)"
## matrixStats NA
## memoise "rlang (>= 0.4.10), cachem"
## MEMSS NA
## metaSEM "Matrix, MASS, ellipse, graphics, stats, utils, mvtnorm,\nnumDeriv, lavaan"
## mets "mvtnorm, numDeriv, compiler, Rcpp, splines, survival (>=\n2.43-1),"
## mi "arm (>= 1.4-11)"
## microbenchmark "graphics, stats"
## miniUI "shiny (>= 0.13), htmltools (>= 0.3), utils"
## minpack.lm NA
## minqa "Rcpp (>= 0.9.10)"
## mitools "DBI, methods, stats"
## mixmeta "stats, graphics, grDevices, utils"
## mlmRev NA

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```

## mnormt "tmvnsim (>= 1.0-2)"
## ModelMetrics "Rcpp, data.table"
## modelr "broom, magrittr, purrr (>= 0.2.2), rlang (>= 0.2.0), tibble,\ntidyr (>= 0.8.0), t
## modeltools "methods"
## moments NA
## msm "survival,mvtnorm,expm"
## mstate "rlang, data.table, magrittr, lattice, RColorBrewer, viridis"
## muhaz "survival"
## multcomp "sandwich (>= 2.3-0), codetools"
## MuMIn "graphics, methods, Matrix, stats, stats4, nlme"
## munsell "colorspace, methods"
## mvmeta "mixmeta, stats, graphics, grDevices, utils"
## mvnfast "Rcpp (>= 0.12.0)"
## mvtnorm "stats, methods"
## network "tibble, magrittr, statnet.common (>= 4.4.1), stats"
## NlcOptim "quadprog"
## nleqslv NA
## nlmrt NA
## nloptr NA
## nlsalt "graphics, stats"
## nlspkg "graphics, stats"
## nlsr "digest"
## NMF "graphics, stats, stringr (>= 1.0.0), digest, grid, grDevices,\ngridBase, colorspace"
## numDeriv NA
## OpenMx "digest, MASS, Matrix, methods, Rcpp, parallel, lifecycle"
## openssl "askpass"
## openxlsx "grDevices, methods, Rcpp, stats, utils, zip, stringi"
## optextras "numDeriv, utils"
## optimx "numDeriv"
## ore NA
## packrat "tools, utils"
## pander "grDevices, graphics, methods, utils, stats, digest, tools,\nRcpp"
## parallelly "parallel, tools, utils"
## parfm "msm, graphics, sn"
## parsedate "rematch2"
## pbapply "parallel"
## pbivnorm NA
## pbkrtest "broom, dplyr, magrittr, MASS, Matrix (>= 1.2.3), methods,\nnumDeriv, parallel, kn
## pbmcaply NA
## pbv "Rcpp"
## pcaL1 NA
## pcaPP "mvtnorm"
## pegas "graphics, utils, methods, adegenet"
## permute "stats"
## phangorn "fastmatch, graphics, grDevices, igraph (>= 1.0), magrittr,\nMatrix, methods, para
## phylobase "ade4, ape (>= 3.0), Rcpp (>= 0.11.0), rncl (>= 0.6.0), grid,\nmethods, stats, RNe
## phylolm "future.apply"
## pixmap "methods, graphics, grDevices"
## pkgbuild "callr (>= 3.2.0), cli, crayon, desc, prettyunits, R6,\nrprojroot, withr (>= 2.1.2
## pkgmaker "tools, grDevices, utils, graphics, codetools, digest, stringr,\nxtable, withr, as
## PKPDmodels "compiler"
## plogr NA
## plotly "tools, scales, httr (>= 1.3.0), jsonlite (>= 1.6), magrittr,\ndigest, viridisLite
## plotrix "grDevices, graphics, stats, utils"

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## plyr                "Rcpp (>= 0.11.0)"
## png                 NA
## polyspline         "stats, graphics"
## polyclip           NA
## polycor            "stats, mvtnorm, Matrix"
## polynom            "stats, graphics"
## prettydoc          "rmarkdown (>= 1.17)"
## prettyunits        NA
## pROC               "methods, plyr, Rcpp (>= 0.11.1)"
## proclim            "Rcpp (>= 0.11.5), stats, grDevices, graphics, survival,\nKernSmooth, lava"
## progress           "hms, prettyunits, R6, crayon"
## projpred           "methods, dplyr, loo (>= 2.0.0), rstantools (>= 2.0.0), lme4,\noptimx, ggplot2, Rcpp"
## promises           "R6, Rcpp, later, rlang, stats, magrittr"
## proxy              "stats, utils"
## pryr               "stringr, codetools, methods, Rcpp (>= 0.11.0)"
## pso                NA
## pspline            NA
## psych              "mnormt,parallel,stats,graphics,grDevices,methods,lattice,nlme"
## psychTools         "foreign,psych"
## purrr              "magrittr (>= 1.5), rlang (>= 0.3.1)"
## qgam               "shiny, plyr, doParallel, parallel, grDevices"
## qgraph             "Rcpp (>= 1.0.0), methods, grDevices, psych, lavaan, plyr,\nHmisc, igraph, jpeg, png"
## qqplotr            "dplyr, robustbase, MASS"
## qra                "ggplot2, lme4, splines"
## quadprog           NA
## quantreg           "methods, graphics, Matrix, MatrixModels, conquer"
## R.cache            "utils, R.methodsS3 (>= 1.8.1), R.oo (>= 1.24.0), R.utils (>= \n2.10.1), digest (>= 0.6.19)"
## R.methodsS3        "utils"
## R.oo               "methods, utils"
## R.rsp              "methods, stats, tools, utils, R.methodsS3 (>= 1.7.1), R.oo (>= \n1.23.0), R.utils, R.methodsS3 (>= 1.8.0)"
## R.utils            "methods, utils, tools, R.methodsS3 (>= 1.8.0)"
## RandomFields       "graphics, methods, grDevices, stats, utils"
## RandomFieldsUtils  "utils, methods"
## RANN               NA
## rappdirs           NA
## raster             "Rcpp, methods"
## rbibutils          "utils, tools"
## Rcgmin             "numDeriv"
## rcmdcheck          "callr (>= 3.1.1.9000), cli (>= 1.1.0), crayon, desc (>= \n1.2.0), digest, pkgbuild, R6, R.utils, R.methodsS3 (>= 1.8.1), R.oo (>= 1.24.0), R.utils (>= \n2.10.1), digest (>= 0.6.19)"
## RColorBrewer       NA
## RcppArmadillo       "Rcpp (>= 0.11.0), stats, utils, methods"
## RcppEigen           "Matrix (>= 1.1-0), Rcpp (>= 0.11.0), stats, utils"
## RcppFaddeeva        "Rcpp (>= 0.11.0), knitr"
## RcppGSL            "Rcpp (>= 0.11.0), stats"
## RcppParallel        NA
## RcppZigurat         "Rcpp, parallel, graphics, stats, utils"
## Rdpack             "tools, utils, rbibutils (>= 1.3)"
## readr              "cli, clipr, crayon, hms (>= 0.4.1), methods, rlang, R6,\ntibble, utils, lifecycle, R6, R.utils, R.methodsS3 (>= 1.8.1), R.oo (>= \n1.23.0), R.utils, R.methodsS3 (>= 1.8.0)"
## readxl             "cellranger, Rcpp (>= 0.12.18), tibble (>= 1.3.1), utils"
## recipes            "ellipsis, generics (>= 0.1.0), glue, gower, ipred, lifecycle,\nlubridate, magrittr, R6, R.utils, R.methodsS3 (>= 1.8.1), R.oo (>= \n1.24.0), R.utils (>= \n2.10.1), digest (>= 0.6.19)"
## registry           "utils"
## regsem             NA
## rematch            NA
## remotes            "methods, stats, tools, utils"

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```

## reportr "ore"
## reprex "callr (>= 3.6.0), cli (>= 2.3.1), clipr (>= 0.4.0), fs, glue,\nknitr (>= 1.23), r
## reshape "plyr"
## reshape2 "plyr (>= 1.8.1), Rcpp, stringr"
## reticulate "Matrix, Rcpp (>= 0.12.7), graphics, jsonlite, methods, png,\nrapprdirs, utils, with
## revdepcheck "assertthat, brio, callr, cli, clisymbols, crancache (>=\n0.0.0.9001), crayon (>=
## rex "lazyeval"
## Rfast NA
## rgeos "utils, stats, graphics"
## rgho "curl, dplyr, httr, jsonlite, lazyeval, magrittr, memoise,\nreadr, tibble, tidyr,
## rgl "graphics, grDevices, stats, utils, htmlwidgets, htmltools,\nknitr, jsonlite (>= 0
## rio "tools, stats, utils, foreign, haven (>= 1.1.2), curl (>= 0.6),\ndata.table (>= 1.
## rms "methods, quantreg, rpart, nlme (>= 3.1-123), polyspline,\nmultcomp, htmlTable (>=
## rncl "Rcpp (>= 0.11.0), progress (>= 1.1.2), stats"
## RNeXML "XML (>= 3.95), plyr (>= 1.8), reshape2 (>= 1.2.2), httr (>=\n0.3), uuid (>= 0.1-1
## rngtools "digest, utils, stats, parallel"
## robustbase "stats, graphics, utils, methods, DEoptimR"
## robustlmm "ggplot2, lattice, nlme, methods, robustbase (>= 0.93), xtable,\nRcpp (>= 0.12.2),
## rockchalk "grDevices, methods, lme4, carData, MASS, kutils"
## roptim "Rcpp (>= 0.12.14)"
## roxygen2 "brew, commonmark, desc (>= 1.2.0), digest, knitr, methods,\npkgload (>= 1.0.2), p
## rpf "Rcpp (>= 1.0.2), mvtnorm, lifecycle"
## rr2 "lme4, phylolm, ape, utils, Matrix, nlme"
## rrBLUP "stats, graphics, grDevices"
## rsconnect "curl, digest, jsonlite, openssl, packrat (>= 0.6), rstudioapi\n(>= 0.5), yaml (>=
## Rsolnp "truncnorm, parallel, stats"
## RSpectra "Matrix (>= 1.1-0), Rcpp (>= 0.11.5)"
## RSQLite "bit64, blob (>= 1.2.0), DBI (>= 1.1.0), memoise, methods,\npkgconfig, Rcpp (>= 0.
## rstan "methods, stats4, inline, gridExtra (>= 2.0.0), Rcpp (>=\n0.12.0), RcppParallel (>=
## rstanarm "bayesplot (>= 1.7.0), ggplot2 (>= 2.2.1), lme4 (>= 1.1-8), loo\n(>= 2.1.0), Matric
## rstantools "desc, stats, utils, Rcpp (>= 0.12.16), RcppParallel (>= 5.0.1)"
## rstatix "stats, utils, tidyr (>= 1.0.0), purrr, broom (>= 0.7.4), rlang\n(>= 0.3.1), tibble
## rstpm2 "graphics, Rcpp (>= 0.10.2), stats, mgcv, bbmle (>= 1.0.20),\nfastGHQuad, deSolve,
## Rtsne "Rcpp (>= 0.11.0), stats"
## RUnit NA
## rvcheck "BiocManager, utils, rlang"
## rversions "curl, utils, xml2 (>= 1.0.0)"
## rvest "httr (>= 0.5), lifecycle (>= 1.0.0), magrittr, rlang (>=\n0.4.10), selectr, tibble
## Rvmmmin "optextras"
## Ryacas "Rcpp (>= 0.12.0), stats, methods, magrittr"
## s2 "Rcpp, wk"
## sandwich "stats, utils, zoo"
## sass "fs, rlang (>= 0.4.10), htmltools (>= 0.5.1), R6, rappdirs"
## scales "farver (>= 2.0.3), labeling, lifecycle, munsell (>= 0.5), R6,\nRColorBrewer, virid
## scatterpie "ggforce, rlang, rvcheck, stats, tidyr, utils"
## scatterplot3d "grDevices, graphics, stats"
## segmented NA
## selectr "methods, stringr, R6"
## sem "matrixcalc, MASS, boot, mi (>= 0.9-99), utils"
## semEff "boot, lme4, parallel, stats, utils"
## semPlot "qgraph (>= 1.2.4), lavaan (>= 0.5-11), sem (>= 3.1-0), plyr,\nXML, igraph (>= 0.6
## seqinr "ade4,segmented"
## sessioninfo "cli, tools, utils, withr"
## setRNG NA

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## sf "classInt (>= 0.4-1), DBI (>= 0.8), graphics, grDevices, grid,\nmagrittr, Rcpp (>=
## shape "stats, graphics, grDevices"
## shiny "utils, grDevices, httpuv (>= 1.5.2), mime (>= 0.3), jsonlite\n(>= 0.9.16), xtable
## shinyBS "shiny (>= 0.11), htmltools"
## shinycssloaders "digest, glue, grDevices, shiny"
## shinyjs "digest (>= 0.6.8), htmltools (>= 0.2.9), jsonlite, shiny (>=\n1.0.0)"
## shinystan "bayesplot (>= 1.5.0), colourpicker, DT (>= 0.2), dygraphs (>=\n1.1.1.2), ggplot2
## shinythemes "shiny (>= 0.11)"
## sn "mnormt (>= 2.0.0), numDeriv, utils, quantreg"
## sna NA
## snow NA
## snowfall NA
## soma "reportr"
## sourcetools NA
## sp "utils, stats, graphics, grDevices, lattice, grid"
## spacetime "graphics, utils, stats, methods, lattice, sp (>= 1.1-0), zoo\n(>= 1.7-9), xts (>=
## spam NA
## SparseM "graphics, stats, utils"
## spData "sp, raster"
## spdep "deldir, boot (>= 1.3-1), graphics, grDevices, utils, stats,\nMatrix, LearnBayes, l
## splancs "stats, graphics, grDevices, methods"
## SQUAREM NA
## stabledist "stats"
## StanHeaders "RcppParallel (>= 5.0.1)"
## statespacer "Rdpack, stats, Rcpp"
## statmod "stats, graphics"
## statnet.common "utils, methods, coda, parallel, tools"
## subplex NA
## SurvCorr "survival, fields"
## survey "stats, graphics, splines, lattice, minqa, numDeriv, mitools\n(>= 2.4)"
## svglite "systemfonts (>= 1.0.0)"
## sys NA
## tcltk2 NA
## tensorflow "config, jsonlite (>= 1.2), processx, reticulate (>= 1.10),\ntfruns (>= 1.0), util
## testDriveR NA
## tfruns "utils, jsonlite (>= 1.2), base64enc, yaml, config, magrittr,\nwhisker, tidyselect
## TH.data NA
## threejs "htmlwidgets (>= 0.3.2), base64enc, crosstalk, methods, stats"
## tidyr "dplyr (>= 0.8.2), ellipsis (>= 0.1.0), glue, lifecycle,\nmagrittr, purrr, rlang,
## tidyselect "ellipsis, glue (>= 1.3.0), purrr (>= 0.3.2), rlang (>= 0.4.6),\nvctrs (>= 0.3.0)"
## tidyverse "broom (>= 0.7.6), cli (>= 2.4.0), crayon (>= 1.4.1), dbplyr\n(>= 2.1.1), dplyr (>=
## timeDate NA
## timereg "lava, numDeriv, stats, graphics, grDevices, utils, methods"
## timeSeries NA
## tkrplot NA
## TMB "graphics, methods, stats, utils, Matrix (>= 1.0-12)"
## tmvnsim NA
## tmvtnorm "stats, methods"
## transport "grDevices, graphics, methods, stats, Rcpp (>= 0.12.10),\ndata.table"
## triangle NA
## truncnorm NA
## tweenr "Rcpp (>= 0.12.3), grDevices, farver, magrittr, rlang"
## ucminf NA
## umap "methods, openssl, reticulate, Rcpp (>= 0.12.6), RSpectra,\nstats"

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## units "Rcpp"
## unmarked "graphics, lme4, MASS, Matrix, parallel, plyr, raster, Rcpp (>=\n0.8.0), stats, TM
## usethis "cli, clipr (>= 0.3.0), crayon, curl (>= 2.7), desc, fs (>=\n1.3.0), gert (>= 1.0.
## VCA "stats, graphics, grDevices, lme4, Matrix, methods, numDeriv"
## vegan "MASS, cluster, mgcv"
## VGAM NA
## vipor "stats, graphics"
## viridis "stats, ggplot2 (>= 1.0.1), gridExtra"
## viridisLite NA
## visNetwork "htmlwidgets, htmltools, jsonlite, magrittr, utils, methods,\ngrDevices, stats"
## webshot "magrittr, jsonlite, callr"
## whisker NA
## whoami "httr, jsonlite, utils"
## wk NA
## XML NA
## xopen "processx"
## xtable "stats, utils"
## xts "methods"
## YieldCurve NA
## zeallot NA
## zipfR "methods, utils, stats, graphics, grDevices, parallel"
## zoo "utils, graphics, grDevices, lattice (>= 0.20-27)"
## base64enc NA
## brio NA
## cairoDevice "grDevices"
## callr "processx (>= 3.5.0), R6, utils"
## cli "glue, utils"
## cpp11 NA
## crayon "grDevices, methods, utils"
## curl NA
## data.table "methods"
## desc "utils, R6, crayon, rprojroot"
## diffobj "crayon (>= 1.3.2), tools, methods, utils, stats"
## digest "utils"
## ellipsis "rlang (>= 0.3.0)"
## evaluate "methods"
## fansi "grDevices, utils"
## flextable "stats, utils, grDevices, graphics, officer (>= 0.3.17),\nrmarkdown, knitr, htmlto
## fontBitstreamVera NA
## fontLiberation NA
## fontquiver "fontBitstreamVera (>= 0.1.0), fontLiberation (>= 0.1.0)"
## freetypeharfbuzz "fontquiver"
## gdtools "Rcpp (>= 0.12.12), systemfonts (>= 0.1.1)"
## glue "methods"
## gmp "methods"
## highr "xfun (>= 0.18)"
## htmltools "utils, digest, grDevices, base64enc, rlang"
## htmlwidgets "grDevices, htmltools (>= 0.3), jsonlite (>= 0.9.16), yaml"
## jsonlite NA
## knitr "evaluate (>= 0.10), highr, methods, markdown, stringr (>=\n0.6), yaml (>= 2.1.19)
## lifecycle "glue, rlang (>= 0.4.10)"
## magrittr NA
## markdown "utils, xfun, mime (>= 0.3)"
## mime "tools"

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```

## officer      "R6, grDevices, stats, graphics, utils, zip (>= 2.1.0), uuid\n(>= 0.1-4), xml2 (>=
## pillar      "cli, crayon (>= 1.3.4), ellipsis (>= 0.3.2), fansi, lifecycle,\nrlang (>= 0.3.0),
## pkgconfig    "utils"
## pkgload      "cli, crayon, desc, methods, rlang, rprojroot, rstudioapi,\nutils, withr"
## praise       NA
## processx     "ps (>= 1.2.0), R6, utils"
## ps           "utils"
## R6           NA
## Rcpp         "methods, utils"
## rematch2     "tibble"
## rJava        NA
## rjson        NA
## rJython      NA
## rlang        "utils"
## rmarkdown    "tools, utils, knitr (>= 1.22), yaml (>= 2.1.19), htmltools (>=\n0.3.5), evaluate
## Rmpfr        "stats, utils, methods"
## rprojroot    NA
## rstudioapi   NA
## rSymPy       NA
## stringi      "tools, utils, stats"
## stringr      "glue (>= 1.2.0), magrittr, stringi (>= 1.1.7)"
## systemfonts  NA
## testthat     "brio, callr (>= 3.5.1), cli (>= 2.2.0), crayon (>= 1.3.4),\ndesc, digest, ellipsis
## tibble       "ellipsis (>= 0.3.2), fansi (>= 0.4.0), lifecycle (>= 0.2.0),\nmagrittr, methods, p
## tinytex      "xfun (>= 0.23)"
## utf8         NA
## uuid         NA
## V8           "Rcpp (>= 0.12.12), jsonlite (>= 1.0), curl (>= 1.0), utils"
## vctrs        "ellipsis (>= 0.2.0), glue, rlang (>= 0.4.10)"
## waldo        "cli, diffobj, fansi, glue, methods, rematch2, rlang (>=\n0.4.10), tibble"
## withr        "graphics, grDevices, stats"
## xfun         "stats, tools"
## xml2         "methods"
## yaml         NA
## zip          NA
## base         NA
## boot         NA
## class        "MASS"
## cluster      "graphics, grDevices, stats, utils"
## codetools    NA
## compiler     NA
## datasets     NA
## foreign      "methods, utils, stats"
## graphics     "grDevices"
## grDevices    NA
## grid         "grDevices, utils"
## KernSmooth   NA
## lattice      "grid, grDevices, graphics, stats, utils"
## MASS         "methods"
## Matrix       "methods, graphics, grid, stats, utils, lattice"
## methods      "utils, stats"
## mgcv         "methods, stats, graphics, Matrix, splines, utils"
## nlme         "graphics, stats, utils, lattice"
## nnet         NA

```

```

## parallel      "tools, compiler"
## rpart         NA
## spatial       NA
## splines       "graphics, stats"
## stats         "utils, grDevices, graphics"
## stats4        "graphics, methods, stats"
## survival      "graphics, Matrix, methods, splines, stats, utils"
## tcltk         "utils"
## tools         NA
## utils         NA
##              LinkingTo
## abind         NA
## ade4          NA
## adegenet      NA
## ADGofTest     NA
## afex          NA
## AICcmodavg    NA
## AlphaBeta     NA
## ape           "Rcpp"
## arm           NA
## askpass       NA
## assertthat    NA
## backports     NA
## bayesplot     NA
## BB            NA
## bbmle         NA
## BCEA          NA
## bdsmatrix     NA
## beeswarm      NA
## benchmarkme   NA
## benchmarkmeData NA
## BH            NA
## Biobase       NA
## BiocGenerics  NA
## BiocManager   NA
## BiocParallel  "BH"
## BiocVersion   NA
## bit           NA
## bit64         NA
## blob          NA
## Bolstad2      NA
## bookdown      NA
## brew          NA
## bridgesampling NA
## brms          NA
## Brobdingnag   NA
## broom         NA
## bslib         NA
## cachem        NA
## car           NA
## caracas       NA
## carData       NA
## caret         NA
## cccd          NA

```

## cellranger	NA
## checkmate	NA
## classInt	NA
## cli	NA
## clipr	NA
## clisymbols	NA
## clusterPower	NA
## coda	NA
## coin	"libcoin (>= 1.0-5)"
## colorspace	NA
## colourpicker	NA
## combinat	NA
## commonmark	NA
## config	NA
## conquer	"Rcpp, RcppArmadillo (>= 0.9.850.1.0)"
## contfrac	NA
## copula	NA
## coRanking	NA
## corpcor	NA
## corrplot	NA
## covr	NA
## cowplot	NA
## crancache	NA
## cranlike	NA
## credentials	NA
## crosstalk	NA
## CRTSize	NA
## cubature	"Rcpp"
## curl	NA
## CVST	NA
## DAAG	NA
## DBI	NA
## dbplyr	NA
## debugme	NA
## deldir	NA
## DEoptimR	NA
## Deriv	NA
## deSolve	NA
## devtools	NA
## dfoptim	NA
## DHARMA	NA
## diagram	NA
## diffusionMap	NA
## dimRed	NA
## doParallel	NA
## dotCall64	NA
## dplyr	NA
## DRR	NA
## DT	NA
## dtplyr	NA
## dygraphs	NA
## e1071	NA
## effects	NA
## eha	NA

## ellipse	NA
## elliptic	NA
## emdbook	NA
## emmeans	NA
## energy	"Rcpp"
## epiphy	"Rcpp"
## estimability	NA
## expm	NA
## ez	NA
## ezsim	NA
## farver	NA
## fastGHQuad	"Rcpp"
## fastICA	NA
## fastmap	NA
## fastmatch	NA
## fBasics	NA
## fdrtool	NA
## fields	NA
## fitODBOD	NA
## flexsurv	"Rcpp"
## FNN	NA
## fOptions	NA
## forcats	NA
## foreach	NA
## formatR	NA
## Formula	NA
## freetypeharfbuzz	NA
## fs	NA
## futile.logger	NA
## futile.options	NA
## future	NA
## future.apply	NA
## GA	"Rcpp, RcppArmadillo"
## gamlss	NA
## gamlss.data	NA
## gamlss.dist	NA
## gamm4	NA
## gap	NA
## gargle	NA
## gdata	NA
## geepack	NA
## generics	NA
## GenSA	NA
## geoR	NA
## gert	NA
## ggbeeswarm	NA
## ggforce	"Rcpp, RcppEigen"
## ggplot2	NA
## ggpol	NA
## ggpubr	NA
## ggrepel	"Rcpp"
## ggResidpanel	NA
## ggbridges	NA
## ggsci	NA



## ggsignif	NA
## gh	NA
## ghyp	NA
## gitcreds	NA
## glasso	NA
## glmmTMB	"TMB, RcppEigen"
## glmnet	NA
## globals	NA
## gmailr	NA
## gmm	NA
## gmodels	NA
## googledrive	NA
## googlesheets4	NA
## gower	NA
## graphicalVAR	"Rcpp, RcppArmadillo"
## gridBase	NA
## gridExtra	NA
## gsl	NA
## gss	NA
## gstat	NA
## gtable	NA
## gtools	NA
## haplotypes	NA
## haven	"cpp11"
## heemod	NA
## here	NA
## Hmisc	NA
## hms	NA
## HSAUR3	NA
## htmlTable	NA
## httpuv	"Rcpp, later"
## httr	NA
## hypergeo	NA
## ids	NA
## igraph	NA
## ini	NA
## inline	NA
## insight	NA
## intervals	NA
## ipred	NA
## IsingSampler	"Rcpp"
## ISLR	NA
## isoband	NA
## iterators	NA
## Jmisc	NA
## jpeg	NA
## jquerylib	NA
## jtools	NA
## kableExtra	NA
## keras	NA
## kernlab	NA
## kutils	NA
## labeling	NA
## lambda.r	NA

## languageR	NA
## later	"Rcpp"
## latticeExtra	NA
## lava	NA
## lavaan	NA
## lavaSearch2	"Rcpp, RcppArmadillo"
## lazyeval	NA
## lbfgs	"Rcpp"
## lbfgsb3c	"Rcpp (>= 0.12.3), RcppArmadillo"
## LearnBayes	NA
## libcoin	"mvtnorm"
## lisrelToR	NA
## listenv	NA
## lle	NA
## lme4	"Rcpp (>= 0.10.5), RcppEigen"
## lmerTest	NA
## lmtest	NA
## loe	NA
## logitnorm	NA
## loo	NA
## lpSolve	NA
## lubridate	"Rcpp"
## manipulateWidget	NA
## maps	NA
## maptools	NA
## MASS	NA
## mathjaxr	NA
## matrixcalc	NA
## MatrixModels	NA
## matrixStats	NA
## memoise	NA
## MEMSS	NA
## metaSEM	NA
## mets	"Rcpp, RcppArmadillo, mvtnorm"
## mi	NA
## microbenchmark	NA
## miniUI	NA
## minpack.lm	NA
## minqa	"Rcpp"
## mitools	NA
## mixmeta	NA
## mlmRev	NA
## mnormt	NA
## ModelMetrics	"Rcpp"
## modelr	NA
## modeltools	NA
## moments	NA
## msm	NA
## mstate	NA
## muhaz	NA
## multcomp	NA
## MuMIn	NA
## munsell	NA
## mvmeta	NA

## mvnfast	"Rcpp, RcppArmadillo, BH"
## mvtnorm	NA
## network	NA
## NlcOptim	NA
## nleqslv	NA
## nlmrt	NA
## nloptr	NA
## nlsalt	NA
## nlspkg	NA
## nlsr	NA
## NMF	NA
## numDeriv	NA
## OpenMx	"Rcpp, RcppEigen, StanHeaders (>= 2.10.0.2), BH (>= \n1.69.0-1), rpf (>= 0.45)"
## openssl	NA
## openxlsx	"Rcpp"
## optextras	NA
## optimx	NA
## ore	NA
## packrat	NA
## pander	"Rcpp"
## parallelly	NA
## parfm	NA
## parsedate	NA
## pbapply	NA
## pbivnorm	NA
## pbkrtest	NA
## pbmcapply	NA
## pbv	"Rcpp, RcppArmadillo"
## pcaL1	NA
## pcaPP	NA
## pegas	NA
## permute	NA
## phangorn	"Rcpp"
## phylobase	"Rcpp"
## phylolm	NA
## pixmap	NA
## pkgbuild	NA
## pkgmaker	NA
## PKPDmodels	NA
## plogr	NA
## plotly	NA
## plotrix	NA
## plyr	"Rcpp"
## png	NA
## polyspline	NA
## polyclip	NA
## polycor	NA
## polynom	NA
## prettydoc	NA
## prettyunits	NA
## pROC	"Rcpp"
## proclim	"Rcpp"
## progress	NA
## projpred	"Rcpp, RcppArmadillo"

```

## promises          "later, Rcpp"
## proxy             NA
## pryr              "Rcpp"
## pso               NA
## pspline           NA
## psych             NA
## psychTools        NA
## purrr             NA
## qgam              NA
## qgraph            "Rcpp"
## qqplotr           NA
## qra               NA
## quadprog          NA
## quantreg          NA
## R.cache           NA
## R.methodsS3        NA
## R.oo              NA
## R.rsp             NA
## R.utils           NA
## RandomFields       "RandomFieldsUtils"
## RandomFieldsUtils NA
## RANN              NA
## rappdirs          NA
## raster            "Rcpp"
## rbibutils         NA
## Rcgmin            NA
## rcmdcheck          NA
## RColorBrewer       NA
## RcppArmadillo      "Rcpp"
## RcppEigen          "Rcpp"
## RcppFaddeeva       "Rcpp"
## RcppGSL            "Rcpp"
## RcppParallel       NA
## RcppZiggurat       "Rcpp, RcppGSL"
## Rdpack            NA
## readr              "BH, cpp11"
## readxl             "progress, Rcpp"
## recipes           NA
## registry           NA
## regsem             "Rcpp, RcppArmadillo"
## rematch           NA
## remotes            NA
## reportr           NA
## reprex            NA
## reshape           NA
## reshape2          "Rcpp"
## reticulate         "Rcpp"
## revdepcheck        NA
## rex               NA
## Rfast              "Rcpp (>= 0.12.3), RcppArmadillo"
## rgeos              "sp"
## rgho              NA
## rgl                NA
## rio               NA

```

```

## rms                NA
## rncl               "Rcpp, progress"
## RNeXML             NA
## rngtools           NA
## robustbase         NA
## robustlmm          "Rcpp, RcppEigen, robustbase, cubature (> 1.3-8)"
## rockchalk          NA
## roptim             "Rcpp, RcppArmadillo"
## roxygen2           "Rcpp"
## rpf               "Rcpp, RcppEigen"
## rr2               NA
## rrBLUP            NA
## rsconnect          NA
## Rsolnp            NA
## RSpectra          "Rcpp, RcppEigen (>= 0.3.3.3.0)"
## RSQLite           "plogr (>= 0.2.0), Rcpp"
## rstan             "Rcpp (>= 0.12.0), RcppEigen (>= 0.3.3.3.0), BH (>= \n1.72.0-2), StanHeaders (>= 2.1.0)"
## rstanarm          "StanHeaders (>= 2.21.0), rstan (>= 2.21.1), BH (>= \n1.72.0-2), Rcpp (>= 0.12.0), I"
## rstantools        NA
## rstatix           NA
## rstpm2            "Rcpp,RcppArmadillo,BH"
## Rtsne             "Rcpp"
## RUnit            NA
## rvcheck          NA
## rversions        NA
## rvest            NA
## Rvmmmin          NA
## Ryacas           "Rcpp"
## s2               "Rcpp, wk"
## sandwich         NA
## sass             NA
## scales           NA
## scatterpie       NA
## scatterplot3d    NA
## segmented        NA
## selectr          NA
## sem             NA
## semEff          NA
## semPlot         NA
## seqinr          NA
## sessioninfo     NA
## setRNG          NA
## sf              "Rcpp"
## shape           NA
## shiny           NA
## shinyBS         NA
## shinycssloaders NA
## shinyjs         NA
## shinystan       NA
## shinythemes     NA
## sn              NA
## sna             NA
## snow            NA
## snowfall        NA

```

## soma	NA
## sourcetools	NA
## sp	NA
## spacetime	NA
## spam	NA
## SparseM	NA
## spData	NA
## spdep	NA
## splancs	NA
## SQUAREM	NA
## stabledist	NA
## StanHeaders	"RcppEigen, RcppParallel (>= 5.0.1)"
## statespacer	"Rcpp, RcppArmadillo"
## statmod	NA
## statnet.common	NA
## subplex	NA
## SurvCorr	NA
## survey	NA
## svglite	"cpp11, systemfonts"
## sys	NA
## tcltk2	NA
## tensorflow	NA
## testDriveR	NA
## tfruns	NA
## TH.data	NA
## threejs	NA
## tidyr	"cpp11 (>= 0.2.6)"
## tidyselect	NA
## tidyverse	NA
## timeDate	NA
## timereg	NA
## timeSeries	NA
## tkrplot	NA
## TMB	"Matrix, RcppEigen"
## tmvnsim	NA
## tmvtnorm	NA
## transport	"RcppEigen, Rcpp"
## triangle	NA
## truncnorm	NA
## tweenr	"Rcpp"
## ucminf	NA
## umap	"Rcpp"
## units	"Rcpp (>= 0.12.10)"
## unmarked	"Rcpp, RcppArmadillo, TMB"
## usethis	NA
## VCA	NA
## vegan	NA
## VGAM	NA
## vipor	NA
## viridis	NA
## viridisLite	NA
## visNetwork	NA
## webshot	NA
## whisker	NA

## whoami	NA
## wk	"cpp11"
## XML	NA
## xopen	NA
## xtable	NA
## xts	"zoo"
## YieldCurve	NA
## zeallot	NA
## zipfR	NA
## zoo	NA
## base64enc	NA
## brio	NA
## cairoDevice	NA
## callr	NA
## cli	NA
## cpp11	NA
## crayon	NA
## curl	NA
## data.table	NA
## desc	NA
## diffobj	NA
## digest	NA
## ellipsis	NA
## evaluate	NA
## fansi	NA
## flextable	NA
## fontBitstreamVera	NA
## fontLiberation	NA
## fontquiver	NA
## freetypeharfbuzz	NA
## gdtools	"Rcpp"
## glue	NA
## gmp	NA
## highr	NA
## htmltools	NA
## htmlwidgets	NA
## jsonlite	NA
## knitr	NA
## lifecycle	NA
## magrittr	NA
## markdown	NA
## mime	NA
## officer	NA
## pillar	NA
## pkgconfig	NA
## pkgload	NA
## praise	NA
## processx	NA
## ps	NA
## R6	NA
## Rcpp	NA
## rematch2	NA
## rJava	NA
## rjson	NA

## rJython	NA
## rlang	NA
## rmarkdown	NA
## Rmpfr	NA
## rprojroot	NA
## rstudioapi	NA
## rSymPy	NA
## stringi	NA
## stringr	NA
## systemfonts	"cpp11 (>= 0.2.1)"
## testthat	NA
## tibble	NA
## tinytex	NA
## utf8	NA
## uuid	NA
## V8	"Rcpp"
## vctrs	NA
## waldo	NA
## withr	NA
## xfun	NA
## xml2	NA
## yaml	NA
## zip	NA
## base	NA
## boot	NA
## class	NA
## cluster	NA
## codetools	NA
## compiler	NA
## datasets	NA
## foreign	NA
## graphics	NA
## grDevices	NA
## grid	NA
## KernSmooth	NA
## lattice	NA
## MASS	NA
## Matrix	NA
## methods	NA
## mgcv	NA
## nlme	NA
## nnet	NA
## parallel	NA
## rpart	NA
## spatial	NA
## splines	NA
## stats	NA
## stats4	NA
## survival	NA
## tcltk	NA
## tools	NA
## utils	NA
##	Suggests
## abind	NA



```

## ade4 "ade4TkGUI, adeggraphics, adephylo, ape, CircStats, deldir,\nlattice, spdep, splancs"
## adegenet "pegas, hierfstat, akima, maps, splancs, tripack, testthat,\npoppr"
## ADGofTest NA
## afex "emmeans (>= 1.4), coin, xtable, parallel, plyr, optimx,\nnloptr, knitr, rmarkdown"
## AICcmodavg "betareg, coxme, fitdistrplus, glmmTMB, lavaan, lme4, maxlike,\nnnet, ordinal, psc"
## AlphaBeta "knitr, rmarkdown"
## ape "gee, expm, igraph, phangorn"
## arm NA
## askpass "testthat"
## assertthat "testthat, covr"
## backports NA
## bayesplot "ggfortify, gridExtra (>= 2.2.1), hexbin, knitr (>= 1.16), loo\n(>= 2.0.0), RColor"
## BB "setRNG, survival, Hmisc, numDeriv"
## bbmle "emdbook, rms, ggplot2, RUnit, MuMIn, AICcmodavg, Hmisc,\noptimx (>= 2013.8.6), kn"
## BCEA "R2jags, R2OpenBUGS, ggplot2, grid, INLA, splancs, mgcv, ldr,\nshiny, shinythemes,"
## bdsmatrix NA
## beeswarm NA
## benchmarkme "covr, DT, ggplot2, knitr, RcppZiggurat, rmarkdown, testthat"
## benchmarkmeData "benchmarkme, covr, DT, testthat"
## BH NA
## Biobase "tools, tkWidgets, ALL, RUnit, golubEsets"
## BiocGenerics "Biobase, S4Vectors, IRanges, GenomicRanges, DelayedArray,\nBiostrings, Rsamtools,"
## BiocManager "BiocVersion, remotes, rmarkdown, testthat, withr, curl, knitr"
## BiocParallel "BiocGenerics, tools, foreach, BatchJobs, BBmisc, doParallel,\nRmpi, GenomicRanges"
## BiocVersion NA
## bit "testthat (>= 0.11.0), roxygen2, knitr, rmarkdown,\nmicrobenchmark, bit64 (>= 4.0.0)"
## bit64 NA
## blob "covr, crayon, pillar (>= 1.2.1), testthat"
## Bolstad2 NA
## bookdown "bslib (>= 0.2.4), downlit (>= 0.2.1), htmlwidgets, jsonlite,\nrstudioapi, miniUI,"
## brew NA
## bridgesampling "testthat, Rcpp, RcppEigen, R2jags, rjags, runjags, knitr,\nrmarkdown, R.rsp, Bayes"
## brms "testthat (>= 0.9.1), emmeans (>= 1.4.2), cmdstanr (>= 0.1.3),\nRWiener, rtdists, r"
## Brodningnag NA
## broom "AER, akima, AUC, bbmle, betareg, biglm, binGroup, boot,\nbtergm, car, caret, clus"
## bslib "shiny (>= 1.6.0), rmarkdown (>= 2.7), thematic, knitr,\ntestthat, withr, rappdirs"
## cachem "testthat"
## car "alr4, boot, coxme, knitr, leaps, lmtest, Matrix,\nMatrixModels, rgl (>= 0.93.960)"
## caracas "Matrix, testthat (>= 2.1.0), knitr, rmarkdown"
## carData NA
## caret "BradleyTerry2, e1071, earth (>= 2.2-3), fastICA, gam (>=\n1.15), ipred, kernlab, l"
## cccd "Matrix"
## cellranger "covr, testthat (>= 1.0.0), knitr, rmarkdown"
## checkmate "R6, fastmatch, data.table (>= 1.9.8), devtools, ggplot2,\nknitr, magrittr, microb"
## classInt "spData (>= 0.2.6.2), units, knitr, rmarkdown"
## cli "callr, covr, grDevices, htmlwidgets, knitr, methods, mockery,\nps (>= 1.3.4.9000)"
## clipr "covr, knitr, rmarkdown, rstudioapi (>= 0.5), testthat (>=\n2.0.0)"
## clisymbols "testthat"
## clusterPower "MASS (<= 7.3-53), geepack (>= 1.2), nloptr (>= 1.2.2.2),\noptimx (>= 2020-4.2), d"
## coda NA
## coin "xtable, e1071, vcd, TH.data (>= 1.0-7)"
## colorspace "datasets, utils, KernSmooth, MASS, kernlab, mvtnorm, vcd,\ntcltk, shiny, shinyjs,"
## colourpicker "knitr (>= 1.7), rmarkdown, rstudioapi (>= 0.5),\nshinydisconnect"
## combinat NA

```

```

## commonmark "curl, testthat, xml2"
## config "testthat, knitr, rmarkdown, covr, spelling"
## conquer NA
## contfrac NA
## copula "MASS, KernSmooth, sfsmisc, scatterplot3d, Rmpfr, bbmle,\nknitr, rmarkdown, abind,
## coRanking "testthat, knitr, rmarkdown, Rtsne, scatterplot3d"
## corpcor ""
## corrplot "knitr, RColorBrewer, rmarkdown, prettydoc, testthat"
## covr "R6, curl, knitr, rmarkdown, htmltools, DT (>= 0.2), testthat,\nrlang, rstudioapi
## cowplot "Cairo, covr, dplyr, forcats, gridGraphics (>= 0.4-0), knitr,\nlattice, magick, ma
## crancache "covr, pingr, testthat, zip"
## cranlike "covr, mockery, testthat, withr, zip"
## credentials "testthat, knitr, rmarkdown"
## crosstalk "shiny, ggplot2, testthat (>= 2.1.0)"
## CRTSize NA
## cubature "testthat, knitr, mvtnorm, benchr, rmarkdown"
## curl "spelling, testthat (>= 1.0.0), knitr, jsonlite, rmarkdown,\nmagrittr, httpuv (>=
## CVST NA
## DAAG "leaps, oz, lme4, quantreg, knitr, boot, rpart, randomForest,\nMASS, survival"
## DBI "blob, covr, dbplyr, dplyr, glue, hms, knitr, magrittr,\nrmmarkdown, rprojroot, RMa
## dbplyr "bit64, covr, knitr, Lahman, nycflights13, odbc, RMariaDB (>=\n1.0.2), rmarkdown,
## debugme "covr, mockery, R6, testthat, withr"
## deldir "polyclip"
## DEoptimR NA
## Deriv "testthat"
## deSolve "scatterplot3d, FME"
## devtools "BiocManager (>= 1.30.12), covr (>= 3.5.1), curl (>= 4.3),\ndigest (>= 0.6.27), DT
## dfoptim NA
## DHARMA "knitr, testthat, rmarkdown, KernSmooth, sfsmisc, MASS, mgcv,\nglmTMB (>= 1.0.1),
## diagram NA
## diffusionMap NA
## dimRed "NMF, MASS, Matrix, RANN, RSpectra, Rtsne, ccc, coRanking,\ndiffusionMap, energy,
## doParallel "caret, mlbench, rpart, RUnit"
## dotCall64 "microbenchmark, OpenMPController, RColorBrewer, roxygen2,\nspam, testthat,"
## dplyr "bench, broom, callr, covr, DBI, dbplyr (>= 1.4.3), knitr,\nLahman, lobster, microb
## DRR "knitr, rmarkdown"
## DT "knitr (>= 1.8), rmarkdown, shiny (>= 1.6), bslib, testit"
## dtplyr "bench, covr, knitr, rmarkdown, testthat (>= 3.0.0), tidyr (>=\n1.1.0)"
## dygraphs "testthat"
## e1071 "cluster, mlbench, nnet, randomForest, rpart, SparseM, xtable,\nMatrix, MASS, slam
## effects "pbkrtest (>= 0.4-4), nlme, MASS, polCA, heplots, splines,\nordinal, car, knitr, b
## eha "knitr, rmarkdown, bookdown"
## ellipse "MASS"
## elliptic "emulator, calibrator (>= 1.2-8)"
## emdbook "R2jags, ellipse, SuppDists, numDeriv, testthat, rgl"
## emmeans "bayesplot, bayestestR, biglm, brms, car, coda (>= 0.17),\nggplot2, lattice, logsp
## energy "MASS, CompQuadForm"
## epiphy "magrittr, dplyr, tidyr, spdep, emdist, vegan, MASS, emdbook,\nknitr, rmarkdown"
## estimability NA
## expm "RColorBrewer, sfsmisc, Rmpfr"
## ez NA
## ezsim NA
## farver "testthat (>= 2.1.0), covr"
## fastGHQuad NA

```

```

## fastICA "MASS"
## fastmap "testthat (>= 2.1.1)"
## fastmatch NA
## fBasics "akima, RUnit, tcltk"
## fdrtool ""
## fields NA
## fitODBOD "testthat, devtools, covr, knitr"
## flexsurv "colorspace, eha, ggplot2, knitr, msm, testthat, TH.data"
## FNN "chemometrics, mvtnorm"
## fOptions "RUnit, tcltk"
## forcats "covr, dplyr, ggplot2, knitr, readr, rmarkdown, testthat"
## foreach "randomForest, doMC, doParallel, testthat, knitr, rmarkdown"
## formatR "codetools, shiny, testit, rmarkdown, knitr"
## Formula NA
## freetypeharfbuzz "covr, testthat"
## fs "testthat, covr, pillar (>= 1.0.0), tibble (>= 1.1.0), crayon,\nrmarkdown, knitr, v
## futile.logger "testthat, jsonlite"
## futile.options NA
## future "RhpCBLASctl, R.rsp, markdown"
## future.apply "datasets, stats, tools, listenv (>= 0.8.0), R.rsp, markdown"
## GA "parallel, doParallel, doRNG (>= 1.6), knitr (>= 1.8),\nrmarkdown (>= 2.0)"
## gamlss NA
## gamlss.data NA
## gamlss.dist NA
## gamm4 NA
## gap "BradleyTerry2, MASS, Matrix, MCMCglmm, R2jags, bdsmatrix,\ncalibrate, circlize, c
## gargle "covr, httpuv, knitr, mockr, rmarkdown, sodium, spelling,\ntestthat (>= 3.0.0)"
## gdata "RUnit"
## geepack NA
## generics "covr, pkgload, testthat, tibble"
## GenSA NA
## geoR "scatterplot3d, lattice, tcltk"
## gert "spelling, knitr, rmarkdown, testthat"
## ggbeeswarm "gridExtra"
## ggforce "sessioninfo, concaveman, deldir, reshape2, units (>= 0.4-6),\ncovr"
## ggplot2 "covr, dplyr, ggplot2movies, hexbin, Hmisc, knitr, lattice,\nmapproj, maps, maptool
## ggpol "knitr, rmarkdown"
## ggpubr "grDevices, knitr, RColorBrewer, gtable"
## ggrepel "knitr, rmarkdown, testthat, gridExtra, devtools, prettydoc,\nggbeeswarm, dplyr, m
## ggResidpanel "dplyr, forcats, knitr, lme4, lmerTest, nlme, randomForest,\nrmarkdown, rpart, tes
## ggridges "covr, dplyr, patchwork, ggplot2movies, forcats, knitr,\nrmarkdown, testthat, vdiff
## ggsci "knitr, rmarkdown, gridExtra, reshape2"
## ggsignif "knitr, rmarkdown, spelling, testthat, vdiffr,"
## gh "covr, knitr, mockery, rmarkdown, rprojroot, spelling,\ntestthat (>= 2.3.2), withr
## ghyp NA
## gitcreds "codetools, testthat, knitr, mockery, oskeyring, rmarkdown,\nwitr"
## glasso NA
## glmmTMB "knitr, rmarkdown, testthat, MASS, lattice, ggplot2 (>=\n2.2.1), mlmRev, bbmle (>=
## glmnet "knitr, lars, testthat, xfun, rmarkdown"
## globals NA
## gmailr "covr, knitr, methods, sodium, rmarkdown, testthat, xml2"
## gmm "knitr, mvtnorm, car, stabledist, MASS, timeDate, timeSeries"
## gmodels "gplots, gtools, Matrix, nlme, lme4 (>= 0.999999-0)"
## googledrive "covr, dplyr, knitr, rmarkdown, roxygen2, sodium, spelling,\ntestthat (>= 2.1.1)"

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## googlesheets4 "covr, readr, rmarkdown, sodium, spelling, testthat (>= \n2.1.0), withr"
## gower "tinytest (>= 0.9.3),"
## graphicalVAR NA
## gridBase "lattice"
## gridExtra "ggplot2, egg, lattice, knitr, testthat"
## gsl NA
## gss NA
## gstat "fields, maps, mapdata, maptools, rgdal (>= 0.5.2), rgeos, sf\n(>= 0.7-2), stars ("
## gtable "covr, testthat, knitr, rmarkdown, ggplot2, profvis"
## gtools "car, gplots, knitr, rstudioapi, SGP, taxize"
## haplotypes NA
## haven "cli, covr, crayon, fs, knitr, pillar (>= 1.4.0), rmarkdown,\ntestthat (>= 3.0.0)"
## heemod "BCEA, diagram, flexsurv, knitr, logitnorm, lpSolve, mgcv,\noptimx, parallel, readr"
## here "conflicted, covr, fs, knitr, palmerpenguins, plyr, readr,\nrlang, rmarkdown, testthat"
## Hmisc "acepack, chron, rms, mice, tables, knitr, plotly (>= 4.5.6),\nrlang, plyr, VGAM"
## hms "crayon, lubridate, pillar (>= 1.1.0), testthat (>= 3.0.0)"
## HSAUR3 "boot (>= 1.3-9), lattice (>= 0.20-23), MASS (>= 7.3-29), mgcv\n(>= 1.7-27), rpart"
## htmlTable "testthat, XML, xml2, Hmisc, reshape, rmarkdown, chron,\nlubridate, tibble, purrr,"
## httpuv "testthat, callr, curl, websocket"
## httr "covr, httpuv, jpeg, knitr, png, readr, rmarkdown, testthat\n(>= 0.8.0), xml2"
## hypergeo NA
## ids "knitr, rcorpora, rmarkdown, testthat"
## igraph "ape, digest, graph, igraphdata, rgl, scales, stats4, tcltk,\ntestthat, withr"
## ini "testthat"
## inline "Rcpp (>= 0.11.0), tinytest"
## insight "AER, afex, aod, BayesFactor, bayestestR, bbmle, bdsmatrix,\nbetareg, BGGM, biglm,"
## intervals NA
## ipred "mvtnorm, mlbench, TH.data, randomForest, party"
## IsingSampler NA
## ISLR "MASS"
## isoband "covr, ggplot2, knitr, magick, microbenchmark, rmarkdown, sf,\ntestthat, xml2"
## iterators "RUnit, foreach"
## Jmisc "testthat"
## jpeg NA
## jquerylib "testthat"
## jtools "boot, broom, broom.mixed, ggstance, huxtable (>= 3.0.0),\nknableExtra, lme4, lmerTest"
## kableExtra "testthat, magick, formattable, sparkline"
## keras "ggplot2, testthat (>= 2.1.0), knitr, rmarkdown, tfdatasets,\njpeg"
## kernlab NA
## kutils "rockchalk"
## labeling NA
## lambda.r "testit"
## languageR "cluster, e1071, rms, Hmisc, MASS, rpart, lattice, zipfR,\nlme4, multcomp, lmerTest"
## later "knitr, rmarkdown, testthat (>= 2.1.0)"
## latticeExtra "maps, mapproj, deldir, tripack, quantreg, zoo, MASS, mgcv"
## lava "KernSmooth, Matrix, Rgraphviz, data.table, ellipse, fields,\nforeach, geepack, go"
## lavaan NA
## lavaSearch2 "data.table, foreach, lme4, lmerTest, numDeriv, pbapply,\nnpbkrtest, R.rsp, riskRegression"
## lazyeval "knitr, rmarkdown (>= 0.2.65), testthat, covr"
## lbfgs NA
## lbfgsb3c "optimx, microbenchmark, testthat, knitr, pkgbuild, rmarkdown,\nRcppArmadillo"
## LearnBayes NA
## libcoin "coin"
## lisrelToR NA

```

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## listenv      "R.utils, R.rsp, markdown"
## lle          "rgl"
## lme4         "knitr, rmarkdown, PKPDmodels, MEMSS, testthat (>= 0.8.1),\nggplot2, mlmRev, optim
## lmerTest     "pbkrtest (>= 0.4-3), tools"
## lmtest       "car, strucchange, sandwich, dynlm, stats4, survival, AER"
## loe          "igraph, Matrix, vegan"
## logitnorm    "RUnit, knitr, markdown, ggplot2, reshape2"
## loo          "bayesplot (>= 1.7.0), brms (>= 2.10.0), ggplot2, graphics,\nknitr, rmarkdown, rst
## lpSolve      NA
## lubridate     "covr, knitr, testthat (>= 2.1.0), vctrs (>= 0.3.0), rmarkdown"
## manipulateWidget "dygraphs, leaflet, plotly, xts, rmarkdown, testthat, covr"
## maps         "mapproj (>= 1.2-0), mapdata (>= 2.3.0), sp, maptools,\nnrnaturalearth"
## maptools     "rgeos (>= 0.1-8), spatstat.geom (>= 1.65-0), PBSmapping,\nmaps, RColorBrewer, ras
## MASS         "lattice, nlme, nnet, survival"
## mathjaxr     "js"
## matrixcalc    NA
## MatrixModels  NA
## matrixStats   "base64enc, ggplot2, knitr, microbenchmark, R.devices, R.rsp"
## memoise      "digest, aws.s3, covr, googleAuthR, googleCloudStorageR, httr,\ntestthat"
## MEMSS        "lattice"
## metaSEM       "metafor, semPlot, R.rsp, testthat"
## mets         "prodlm, cmprsk, testthat (>= 0.11), ucminf, knitr, bookdown,\nnrmarkdown, ggplot2
## mi           "betareg, lattice, knitr, MASS, nnet, parallel, sn, survival,\ntruncnorm, foreign"
## microbenchmark "ggplot2, multcomp, RUnit"
## miniUI       NA
## minpack.lm    "MASS"
## minqa        NA
## mitools       "RODBC, foreign"
## mixmeta       "metafor, meta, rmeta, dosresmeta, nlme, MASS, dlnm"
## mlmRev       "lattice"
## mnormt        NA
## ModelMetrics  "testthat"
## modelr        "compiler, covr, ggplot2, testthat"
## modeltools    NA
## moments       NA
## msm           "mstate,minqa,doParallel,foreach,numDeriv,testthat,flexsurv"
## mstate        "cmprsk, ggplot2, knitr, rmarkdown"
## muhaz         NA
## multcomp      "lme4 (>= 0.999375-16), nlme, robustbase, coin, MASS, foreign,\nxtable, lmtest, co
## MuMIn         "lme4 (>= 1.1.0), mgcv (>= 1.7.5), gamm4, MASS, nnet, survival\n(>= 3.1.0), geepack
## munsell       "ggplot2, testthat"
## mvmeta        "metafor, meta, rmeta, nlme, MASS, dlnm"
## mvnfast       "knitr, rmarkdown, testthat, mvtnorm, microbenchmark, MASS,\nplyr, RhpcBLASctl"
## mvtnorm       NA
## network       "sna, testthat, covr"
## NlcOptim      NA
## nleqslv       NA
## nlmr          "minpack.lm, optimx, Rvmmmin, Rcgmin, numDeriv"
## nloptr        "testthat (>= 0.8.1), knitr, rmarkdown, inline (>= 0.3.14)"
## nlsalt        "MASS"
## nlspkg        "MASS"
## nlsrc         "minpack.lm, optimx, Rvmmmin, Rcgmin, numDeriv, knitr,\nnrmarkdown, Ryacas, Deriv"
## NMF           "fastICA, doMPI, bigmemory (>= 4.2), synchronicity(>= 1.3.2),\nncorpcor, xtable, de
## numDeriv      NA

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## OpenMx "mvtnorm, numDeriv, roxygen2 (>= 6.1), rpf (>= 0.45),\nsnowfall, lme4, covr, testthat"
## openssl "testthat (>= 2.1.0), digest, knitr, rmarkdown, jsonlite,\njose, sodium"
## openxlsx "knitr, testthat, roxygen2, rmarkdown"
## optextras NA
## optimx "knitr, rmarkdown, markdown, setRNG, BB, ucminf, minqa,\ndfoptim, lbfgsb3c, lbfgs,
## ore "crayon, rex, testthat"
## packrat "testthat (>= 0.7), devtools, httr, knitr, rmarkdown"
## pander "grid, lattice, ggplot2 (>= 0.9.2), sylly, sylly.en, logger,\nnsurvival, microbenchmark"
## parallelly NA
## parfm NA
## parsedate "covr, testthat, withr"
## pbapply NA
## pbivnorm NA
## pbkrtest NA
## pbmcapply NA
## pbv "pbivnorm"
## pcaL1 NA
## pcaPP "robustbase"
## pegas "rgl, snpStats"
## permute "vegan (>= 2.0-0), testthat (>= 0.5), parallel"
## phangorn "Biostrings, knitr, magick, prettydoc, rgl, rmarkdown, seqinr,\nseqLogo, tinytest,
## phylobase "MASS, testthat (>= 0.8.1), knitr"
## phylolm "testthat"
## pixmap NA
## pkgbuild "Rcpp, cpp11, testthat, covr"
## pkgmaker "devtools (>= 0.8), roxygen2, RUnit, testthat, knitr,\nrmardown, markdown, yaml,
## PKPDmodels "lattice"
## plogr "Rcpp"
## plotly "MASS, maps, hexbin, ggthemes, GGally, testthat, knitr,\ndevelop, shiny (>= 1.1.0)
## plotrix NA
## plyr "abind, covr, doParallel, foreach, iterators, itertools,\ntcltk, testthat"
## png NA
## polyspline NA
## polyclip NA
## polycor NA
## polynom "knitr, rmarkdown"
## prettydoc "knitr, KernSmooth"
## prettyunits "codetools, covr, testthat"
## pROC "microbenchmark, tcltk, MASS, logcondens, doParallel,\ntestthat, vdiff, ggplot2"
## prodlm NA
## progress "Rcpp, testthat, withr"
## projpred "rstanarm, brms, testthat, knitr, rmarkdown, glmnet, bayesplot\n(>= 1.5.0)"
## promises "testthat, future (>= 1.21.0), fastmap (>= 1.1.0), purrr,\nknitr, rmarkdown, vembed
## proxy "cba"
## pryr "testthat (>= 0.8.0)"
## pso "numDeriv"
## pspline NA
## psych "psychTools, GPArotation, lavaan, lme4, Rcsdp, graph, knitr,\nRgraphviz"
## psychTools "parallel, GPArotation, lavaan,knitr"
## purrr "covr, crayon, dplyr (>= 0.7.8), knitr, rmarkdown, testthat,\ntibble, tidyselect"
## qgam "knitr, rmarkdown, MASS, RhpBLASctl, testthat"
## qgraph "BDgraph, huge"
## qqplotr "shiny, devtools, lattice, shinyBS, knitr, rmarkdown"
## qra "knitr, rmarkdown, plyr, robustlmm, MASS, fitODBOD, glmmTMB,\nVGAM, bbmle, epiphy,

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## quadprog          NA
## quantreg          "tripack, akima, MASS, survival, rgl, logspline, nor1mix,\nFormula, zoo, R.rsp"
## R.cache           NA
## R.methodsS3       "codetools"
## R.oo              "tools"
## R.rsp             "tcltk, markdown (>= 0.8), knitr (>= 1.9), R.devices (>=\n2.16.1), base64enc (>= 0.
## R.utils           "digest (>= 0.6.10)"
## RandomFields      "colorspace, RColorBrewer, mvtnorm, raster, tcltk2, tcltk,\ntkrplot, spam, tools, r
## RandomFieldsUtils NA
## RANN              "testthat"
## rappdirs          "roxygen2, testthat (>= 3.0.0), covr, withr"
## raster            "rgdal (>= 1.5-8), rgeos (>= 0.3-8), ncdf4, igraph, tcltk,\nparallel, rasterVis, M
## rbibutils         "testthat"
## Rcgmin            NA
## rcmdcheck         "covr, knitr, mockery, rmarkdown, testthat"
## RColorBrewer      NA
## RcppArmadillo      "tinytest, Matrix (>= 1.3.0), pkgKitten, reticulate, slam"
## RcppEigen         "inline, tinytest, pkgKitten, microbenchmark"
## RcppFaddeeva       "testthat"
## RcppGSL           "tinytest"
## RcppParallel      "Rcpp, RUnit, knitr, rmarkdown"
## RcppZiggurat       "rbenchmark, microbenchmark, lattice, knitr, rmarkdown, pinp"
## Rdpack            "grDevices, testthat, rstudioapi, rprojroot, gbrd"
## readr             "covr, curl, dplyr, knitr, rmarkdown, spelling, stringi,\ntestthat, xml2"
## readxl            "covr, knitr, rmarkdown, rprojroot (>= 1.1), testthat"
## recipes           "covr, ddalpha, dimRed (>= 0.2.2), fastICA, ggplot2, igraph,\nknernlab, knitr, mode
## registry          NA
## regsem            "snowfall, markdown, MASS, GA, caret, glmnet, ISLR, lbfgs,\nnumDeriv, psych, knitr
## rematch           "covr, testthat"
## remotes           "brew, callr, codetools, curl, covr, git2r (>= 0.23.0), knitr,\nmockery, pkgbuild
## reportr           "testthat (>= 0.11.0)"
## reprex            "covr, fortunes, miniUI, mockr, rprojroot, sessioninfo, shiny,\nspelling, styler (
## reshape           NA
## reshape2          "covr, lattice, testthat (>= 0.8.0)"
## reticulate         "callr, knitr, rmarkdown, testthat"
## revdepcheck       "covr, debugme, forcats, ggplot2, rmarkdown, testthat"
## rex              "testthat, knitr, rmarkdown, dplyr, ggplot2, magrittr, Hmisc,\nstringr, rvest, rox
## Rfast             NA
## rgeos             "maptools (>= 0.8-5), testthat, XML, maps, rgdal"
## rgho              "testthat, knitr, rmarkdown"
## rgl               "MASS, rmarkdown, deldir, orientlib, lattice, misc3d,\nrstudioapi, magick, plotrix
## rio               "datasets, bit64, testthat, knitr, magrittr, arrow, clipr,\nfeather, fst, hexView,
## rms               "boot, tcltk, plotly (>= 4.5.6), knitr, mice, rmsb"
## rncl              "testthat, ape"
## RNeXML            "spelling, rdflib, geiger (>= 2.0), phytools (>= 0.3.93),\nknitr (>= 1.5), rfigsha
## rngtools          "covr, RUnit, testthat"
## robustbase        "grid, MASS, lattice, boot, cluster, Matrix, robust,\nfit.models, MPV, xtable, ggp
## robustlmm         "digest, reshape2, microbenchmark, emmeans (>= 1.4),\nestimability"
## rockchalk         "tables, Hmisc, car"
## roptim            "R.rsp"
## roxygen2          "covr, devtools, rmarkdown, testthat (>= 2.1.0), R.methodsS3,\nR.oo"
## rpf              "testthat, roxygen2, ggplot2, reshape2, gridExtra, numDeriv,\nknitr, mirt, markdown
## rr2              "testthat"
## rrBLUP            "parallel"

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## rsconnect      "RCurl, callr, httpuv, knitr, plumber (>= 0.3.2), reticulate,\nrmarkdown (>= 1.1),
## Rsolnp         NA
## RSpectra      "knitr, rmarkdown, prettydoc"
## RSQLite       "DBItest (>= 1.7.0), gert, gh, knitr, rmarkdown, hms, rvest,\ntestthat, xml2"
## rstan         "RUnit, RcppEigen (>= 0.3.3.3.0), BH (>= 1.72.0-2), parallel,\nKernSmooth, shinyt
## rstanarm      "betareg, data.table (>= 1.10.0), digest, gridExtra, HSAUR3,\nknitr (>= 1.15.1), M
## rstantools    "rstan (>= 2.17.2), usethis (>= 1.5.1), testthat (>= 2.0.0),\nknitr, pkgbuild, pkg
## rstatix       "knitr, rmarkdown, ggpubr, graphics, emmeans, coin, boot,\ntestthat, spelling"
## rstpm2        "eha, testthat, ggplot2, lattice, readstata13, mstate, scales,\nsurvPen"
## Rtsne         "irlba, testthat"
## RUnit         "XML (>= 3.1.0)"
## rvcheck       NA
## rversions     "mockery, testthat"
## rvest         "covr, glue, knitr, readr, rmarkdown, repurrrsive, spelling,\nstringi (>= 0.3.1),
## Rvmmmin       "knitr, markdown"
## Ryacas        "devtools, exams, knitr, Matrix, pkgload, rmarkdown, igraph,\ntestthat (>= 2.1.0),
## s2            "testthat, vctrs"
## sandwich      "AER, car, geepack, lattice, lmtest, MASS, multiwayvcov,\nparallel, pcse, plm, psc
## sass          "testthat, knitr, rmarkdown, withr, shiny, curl"
## scales        "bit64, covr, dichromat, ggplot2, hms (>= 0.5.0), testthat (>=\n2.1.0)"
## scatterpie    "knitr, rmarkdown, prettydoc, maps"
## scatterplot3d NA
## segmented     NA
## selectr       "testthat, XML, xml2"
## sem           "polycor, DiagrammerR"
## semEff        "knitr, rmarkdown"
## semPlot       "MplusAutomation (>= 0.5-3)"
## seqinr        NA
## sessioninfo   "callr, covr, mockery, testthat"
## setRNG        NA
## sf            "blob, covr, dplyr (>= 0.8-3), ggplot2, knitr, lwgeom (>=\n0.2-1), maps, mapview, m
## shape         NA
## shiny         "datasets, Cairo (>= 1.5-5), testthat (>= 2.1.1), knitr (>=\n1.6), markdown, rmark
## shinyBS       NA
## shinycssloaders "shinydisconnect, shinyjs"
## shinyjs       "knitr (>= 1.7), rmarkdown, shinyAce, shinydisconnect,\ntestthat (>= 0.9.1)"
## shinystan     "coda, knitr (>= 1.9), rmarkdown (>= 0.8.1), rstanarm (>=\n2.17.4), testthat"
## shinythemes   NA
## sn            "R.rsp"
## sna           "rgl, numDeriv, SparseM"
## snow          "Rmpi,rlecuyer,nws"
## snowfall      "Rmpi"
## soma          NA
## sourcetools    "testthat"
## sp            "RColorBrewer, rgdal (>= 1.2-3), rgeos (>= 0.3-13), gstat,\nmaptools, deldir"
## spacetime     "adehabitatLT, cshapes, diveMove, foreign, gstat (>= 1.0-16),\nmaps, mapdata, mapt
## spam          "spam64, fields, Matrix, testthat, R.rsp, truncdist, knitr,\nrmarkdown"
## SparseM       NA
## spData        "foreign, maptools, rgdal, sf (>= 0.9-1), spDataLarge (>=\n0.4.0), spdep, spatialr
## spdep         "spatialreg (>= 1.1-1), parallel, dbscan, rgeos, RColorBrewer,\nlattice, xtable, ma
## splancs       NA
## SQUAREM       "setRNG"
## stabledist    "Matrix, fBasics, FMStable, RUnit, Rmpfr, sfsmisc"
## StanHeaders   "Rcpp, BH, knitr (>= 1.15.1), rmarkdown, Matrix, methods,\nrstan"

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## statespacer "datasets, graphics, knitr, numDeriv (>= 2016.8-1.1), optimx\n(>= 2020-4.2), rmarkd
## statmod "MASS, tweedie"
## statnet.common "covr"
## subplex NA
## SurvCorr NA
## survey "foreign, MASS, KernSmooth, hexbin, RSQLite, quantreg,\nparallel, CompQuadForm, DB
## svglite "htmltools, testthat, xml2 (>= 1.0.0), covr, fontquiver (>=\n0.2.0), knitr, rmarkd
## sys "unix (>= 1.4), spelling, testthat"
## tcltk2 "utils"
## tensorflow "testthat (>= 2.1.0), keras, tfestimators, callr"
## testDriveR "dplyr, ggplot2, knitr, rmarkdown, testthat"
## tfruns "testthat, knitr, withr, here, rmarkdown"
## TH.data "dplyr, gdata, plyr"
## threejs "maps"
## tidyr "covr, data.table, jsonlite, knitr, readr, repurrrsive (>=\n1.0.0), rmarkdown, tes
## tidyselect "covr, crayon, dplyr, knitr, magrittr, rmarkdown, testthat (>=\n2.3.0), tibble (>=
## tidyverse "covr, feather, glue, knitr, rmarkdown, testthat"
## timeDate "date, RUnit"
## timereg "mets,"
## timeSeries "RUnit, robustbase, xts, PerformanceAnalytics, fTrading"
## tkrplot NA
## TMB "numDeriv, parallel"
## tmvnsim NA
## tmvtnorm "lattice"
## transport "animation, ks, testthat"
## triangle "testthat, knitr, rmarkdown, covr"
## truncnorm "testthat"
## tweenr "testthat, covr"
## ucminf "numDeriv"
## umap "knitr, rmarkdown, testthat"
## units "udunits2, NISTunits, measurements, xml2, magrittr, pillar (>=\n1.3.0), dplyr (>=
## unmarked NA
## usethis "covr, knitr, magick, mockr, rmarkdown, roxygen2, spelling (>=\n1.2), styler (>= 1
## VCA "VFP, STB, knitr, rmarkdown, prettydoc"
## vegan "parallel, tcltk, knitr, markdown"
## VGAM "VGAMextra, MASS, mgcv"
## vipor "testthat, beeswarm, lattice, ggplot2, beanplot, vioplot,\nggbeeswarm,"
## viridis "hexbin (>= 1.27.0), scales, MASS, knitr, dichromat,\nncolorspace, rasterVis, httr,
## viridisLite "hexbin (>= 1.27.0), ggplot2 (>= 1.0.1), testthat, covr"
## visNetwork "knitr, rmarkdown, webshot, igraph, rpart, shiny,\nshinyWidgets, colourpicker, spa
## webshot "httpuv, knitr, rmarkdown, shiny"
## whisker "markdown"
## whoami "covr, mockery, testthat, withr"
## wk "testthat (>= 3.0.0), vctrs (>= 0.3.0), wkutils, sf, tibble"
## XML "bitops, RCurl"
## xopen "ps, testthat"
## xtable "knitr, plm, zoo, survival"
## xts "timeSeries, timeDate, tseries, chron, fts, tis, RUnit"
## YieldCurve NA
## zeallot "testthat, knitr, rmarkdown, purrr, magrittr"
## zipfR NA
## zoo "AER, coda, chron, fts, ggplot2 (>= 3.0.0), mondate, scales,\nstinepack, strucchan
## base64enc NA
## brio "testthat (>= 2.1.0), covr"

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```

## cairoDevice      NA
## callr            "cli, covr, ps, rprojroot, spelling, testthat, withr (>= \n2.3.0)"
## cli              "callr, covr, grDevices, htmlwidgets, knitr, methods, mockery, \nps (>= 1.3.4.9000)"
## cpp11            "bench, brio, callr, cli, covr, decor, desc, ggplot2, glue, \nknitr, lobstr, mockery"
## crayon           "mockery, rstudioapi, testthat, withr"
## curl             "spelling, testthat (>= 1.0.0), knitr, jsonlite, rmarkdown, \nmagrittr, httpuv (>= 1.0.0)"
## data.table       "bit64 (>= 4.0.0), bit (>= 4.0.4), curl, R.utils, xts, \nnanotime, zoo (>= 1.8-1), "
## desc             "covr, testthat, whoami, withr, spelling, gh"
## diffobj          "knitr, rmarkdown"
## digest           "tinytest, knitr, rmarkdown, minidown"
## ellipsis         "covr, testthat"
## evaluate         "testthat, lattice, ggplot2"
## fansi            "unitizer, knitr, rmarkdown"
## flextable        "testthat (>= 2.1.0), xtable, webshot, magick, ggplot2, \nnscales, broom, mgcv, bookdown"
## fontBitstreamVera NA
## fontLiberation   NA
## fontquiver       "testthat, htmltools"
## freetypeharfbuzz "covr, testthat"
## gdtools          "htmltools, testthat, fontquiver (>= 0.2.0), curl"
## glue             "testthat, covr, magrittr, crayon, knitr, rmarkdown, DBI, \nRSQLite, R.utils, forcats"
## gmp              "Rmpfr, MASS, round"
## highr            "knitr, markdown, testit"
## htmltools        "markdown, testthat, withr, Cairo, ragg, shiny"
## htmlwidgets      "knitr (>= 1.8), rmarkdown, testthat"
## jsonlite         "httr, curl, plyr, testthat, knitr, rmarkdown, R.rsp, sf"
## knitr            "formatR, testit, digest, rgl (>= 0.95.1201), codetools, \nrmarkdown, htmlwidgets (>= 1.0.0)"
## lifecycle        "covr, crayon, knitr, rmarkdown, testthat (>= 3.0.1), tibble"
## magrittr         "covr, knitr, rlang, rmarkdown, testthat"
## markdown         "knitr, RCurl"
## mime             NA
## officer          "testthat, devEMF, ggplot2, rmarkdown, base64enc, knitr, rsvg"
## pillar           "bit64, debugme, DiagrammeR, dplyr, formattable, ggplot2, \nknitr, lubridate, nycflights13"
## pkgconfig        "covr, testthat, disposables (>= 1.0.3)"
## pkgload          "bitops, covr, pkgbuild, Rcpp, testthat"
## praise           "testthat"
## processx         "callr (>= 3.2.0), cli, codetools, covr, curl, debugme, \nparallel, testthat, withr"
## ps               "callr, covr, curl, pingr, processx (>= 3.1.0), R6, rlang, \ntestthat, tibble"
## R6               "knitr, microbenchmark, pryr, testthat, ggplot2, scales"
## Rcpp             "tinytest, inline, rbenchmark, pkgKitten (>= 0.1.2)"
## rematch2         "covr, testthat"
## rJava            NA
## rjson            NA
## rJython          NA
## rlang            "cli, covr, crayon, glue, magrittr, methods, pak, pillar, \nrmarkdown, testthat (>= 1.0.0)"
## rmarkdown        "shiny (>= 1.6.0), tufte, testthat (>= 3.0.0), digest, \ndygraphs, vctrs, tibble, forcats"
## Rmpfr            "MASS, Bessel, polynom, sfsmisc (>= 1.0-20), Matrix"
## rprojroot        "covr, knitr, lifecycle, mockr, rmarkdown, testthat (>= \n3.0.0), withr"
## rstudioapi       "testthat, knitr, rmarkdown, clipr"
## rSymPy           NA
## stringi          NA
## stringr          "covr, htmltools, htmlwidgets, knitr, rmarkdown, testthat"
## systemfonts      "testthat (>= 2.1.0), covr, knitr, rmarkdown, tools"
## testthat         "covr, curl (>= 0.9.5), diffviewer (>= 0.1.0), knitr, mockery, \nrmarkdown, rstudioapi"
## tibble           "bench, bit64, blob, cli, covr, crayon (>= 1.3.4), DiagrammeR, \ndplyr, evaluate, forcats"

```

```

## tinytex          "testit, rstudioapi"
## utf8             "covr, knitr, rlang, rmarkdown, testthat (>= 3.0.0)"
## uuid            NA
## V8              "testthat, knitr, rmarkdown"
## vctr            "bit64, covr, crayon, dplyr (>= 0.8.5), generics, knitr,\npillar (>= 1.4.4), pkgdown"
## waldo           "testthat (>= 3.0.0), covr, R6"
## withr           "covr, DBI, knitr, lattice, methods, rmarkdown, RSQLite,\ntestthat (>= 2.1.0)"
## xfun            "testit, parallel, codetools, rstudioapi, tinytex (>= 0.30),\nmime, markdown, knitr"
## xml2            "covr, curl, httr, knitr, magrittr, mockery, rmarkdown,\ntestthat (>= 2.1.0)"
## yaml           "RUnit"
## zip             "covr, processx, R6, testthat, withr"
## base            "methods"
## boot           "MASS, survival"
## class          NA
## cluster        "MASS, Matrix"
## codetools      NA
## compiler       NA
## datasets       NA
## foreign        NA
## graphics       NA
## grDevices      "KernSmooth"
## grid           "lattice"
## KernSmooth     "MASS, carData"
## lattice        "KernSmooth, MASS, latticeExtra"
## MASS           "lattice, nlme, nnet, survival"
## Matrix         "expm, MASS"
## methods        "codetools"
## mgcv           "parallel, survival, MASS"
## nlme           "Hmisc, MASS"
## nnet           "MASS"
## parallel       "methods"
## rpart          "survival"
## spatial        "MASS"
## splines        "Matrix, methods"
## stats          "MASS, Matrix, SuppDists, methods, stats4"
## stats4        NA
## survival       NA
## tcltk          NA
## tools          "codetools, methods, xml2, curl, commonmark"
## utils          "methods, xml2, commonmark"
##               Enhances
## abind          NA
## ade4           NA
## adegenet       NA
## ADGofTest      NA
## afex           NA
## AICcmodavg     NA
## AlphaBeta      NA
## ape            NA
## arm            NA
## askpass        NA
## assertthat     NA
## backports      NA
## bayesplot      NA

```

## BB	NA
## bbmle	NA
## BCEA	NA
## bdsmatrix	NA
## beeswarm	NA
## benchmarkme	NA
## benchmarkmeData	NA
## BH	NA
## Biobase	NA
## BiocGenerics	NA
## BiocManager	NA
## BiocParallel	NA
## BiocVersion	NA
## bit	NA
## bit64	NA
## blob	NA
## Bolstad2	NA
## bookdown	NA
## brew	NA
## bridgesampling	NA
## brms	NA
## Brobdingnag	NA
## broom	NA
## bslib	NA
## cachem	NA
## car	NA
## caracas	NA
## carData	NA
## caret	NA
## cccd	NA
## cellranger	NA
## checkmate	NA
## classInt	NA
## cli	NA
## clipr	NA
## clisymbols	NA
## clusterPower	NA
## coda	NA
## coin	NA
## colorspace	NA
## colourpicker	NA
## combinat	NA
## commonmark	NA
## config	NA
## conquer	NA
## contfrac	NA
## copula	"nor1mix, copulaData"
## coRanking	NA
## corpcor	NA
## corrplot	NA
## covr	NA
## cowplot	NA
## crancache	NA
## cranlike	NA

## credentials	NA
## crosstalk	NA
## CRTSize	NA
## cubature	NA
## curl	NA
## CVST	NA
## DAAG	NA
## DBI	NA
## dbplyr	NA
## debugme	NA
## deldir	NA
## DEoptimR	"robustbase"
## Deriv	NA
## deSolve	NA
## devtools	NA
## dfoptim	NA
## DHARMA	NA
## diagram	NA
## diffusionMap	NA
## dimRed	NA
## doParallel	"compiler"
## dotCall64	NA
## dplyr	NA
## DRR	NA
## DT	NA
## dtplyr	NA
## dygraphs	"rmarkdown (>= 0.3.3), shiny (>= 0.10.2.1)"
## e1071	NA
## effects	NA
## eha	NA
## ellipse	NA
## elliptic	NA
## emdbook	NA
## emmeans	"CARBayes, coxme, gee, geepack, MCMCglmm, MCMCpack, mice,\nnnet, pscl, rstanarm, s
## energy	NA
## epiphy	NA
## estimability	NA
## expm	NA
## ez	NA
## ezsim	NA
## farver	NA
## fastGHQuad	NA
## fastICA	NA
## fastmap	NA
## fastmatch	NA
## fBasics	NA
## fdrtool	NA
## fields	NA
## fitODBOD	NA
## flexsurv	NA
## FNN	NA
## fOptions	NA
## forcats	NA
## foreach	NA

## formatR	NA
## Formula	NA
## freetypeharfbuzz	NA
## fs	NA
## futile.logger	NA
## futile.options	NA
## future	NA
## future.apply	NA
## GA	NA
## gamlss	NA
## gamlss.data	NA
## gamlss.dist	NA
## gamm4	NA
## gap	NA
## gargle	NA
## gdata	NA
## geepack	NA
## generics	NA
## GenSA	NA
## geoR	NA
## gert	NA
## ggbeeswarm	NA
## ggforce	NA
## ggplot2	"sp"
## ggpol	NA
## ggpubr	NA
## ggrepel	NA
## ggResidpanel	NA
## ggridges	NA
## ggsci	NA
## ggsignif	NA
## gh	NA
## ghyp	NA
## gitcreds	NA
## glasso	NA
## glmmTMB	NA
## glmnet	NA
## globals	NA
## gmailr	NA
## gmm	NA
## gmodels	NA
## googledrive	NA
## googlesheets4	NA
## gower	NA
## graphicalVAR	NA
## gridBase	NA
## gridExtra	NA
## gsl	NA
## gss	NA
## gstat	NA
## gtable	NA
## gtools	NA
## haplotypes	NA
## haven	NA

## heemod	NA
## here	NA
## Hmisc	NA
## hms	NA
## HSAUR3	NA
## htmlTable	NA
## httpuv	NA
## httr	NA
## hypergeo	NA
## ids	NA
## igraph	NA
## ini	NA
## inline	NA
## insight	NA
## intervals	NA
## ipred	NA
## IsingSampler	NA
## ISLR	NA
## isoband	NA
## iterators	NA
## Jmisc	NA
## jpeg	NA
## jquerylib	NA
## jtools	"brms, quantreg, rstanarm"
## kableExtra	NA
## keras	NA
## kernlab	NA
## kutils	NA
## labeling	NA
## lambda.r	NA
## languageR	NA
## later	NA
## latticeExtra	NA
## lava	NA
## lavaan	NA
## lavaSearch2	NA
## lazyeval	NA
## lbfgs	NA
## lbfgsb3c	NA
## LearnBayes	NA
## libcoin	NA
## lisrelToR	NA
## listenv	NA
## lle	NA
## lme4	NA
## lmerTest	NA
## lmtest	NA
## loe	NA
## logitnorm	NA
## loo	NA
## lpSolve	NA
## lubridate	"chron, timeDate, tis, zoo"
## manipulateWidget	NA
## maps	NA

## maptools	"gpclib"
## MASS	NA
## mathjaxr	NA
## matrixcalc	NA
## MatrixModels	NA
## matrixStats	NA
## memoise	NA
## MEMSS	NA
## metaSEM	NA
## mets	NA
## mi	NA
## microbenchmark	NA
## miniUI	NA
## minpack.lm	NA
## minqa	NA
## mitools	NA
## mixmeta	NA
## mlmRev	NA
## mnormt	NA
## ModelMetrics	NA
## modelr	NA
## modeltools	NA
## moments	NA
## msm	NA
## mstate	NA
## muhaz	NA
## multcomp	NA
## MuMIn	"aod, aods3, betareg, caper, coxme, cplm, gee, glmmML,\nlogistf, MCMCglmm, ordinal"
## munsell	NA
## mvmeta	NA
## mvnfast	NA
## mvtnorm	NA
## network	NA
## NlcOptim	NA
## nleqslv	NA
## nlmrt	NA
## nloptr	NA
## nlsalt	NA
## nlspkg	NA
## nlsr	NA
## NMF	NA
## numDeriv	NA
## OpenMx	NA
## openssl	NA
## openxlsx	NA
## optextras	NA
## optimx	NA
## ore	NA
## packrat	NA
## pander	NA
## parallelly	NA
## parfm	NA
## parsedate	NA
## pbapply	NA



## pbivnorm	NA
## pbkrtest	NA
## pbmcaply	NA
## pbv	NA
## pcaL1	NA
## pcaPP	NA
## pegas	NA
## permute	NA
## phangorn	NA
## phylobase	NA
## phylolm	NA
## pixmap	NA
## pkgbuild	NA
## pkgmaker	NA
## PKPDmodels	NA
## plogr	NA
## plotly	NA
## plotrix	NA
## plyr	NA
## png	NA
## polyspline	NA
## polyclip	NA
## polycor	NA
## polynom	NA
## prettydoc	NA
## prettyunits	NA
## pROC	NA
## prodlim	NA
## progress	NA
## projpred	NA
## promises	NA
## proxy	NA
## pryr	NA
## pso	NA
## pspline	NA
## psych	NA
## psychTools	NA
## purrr	NA
## qgam	NA
## qgraph	NA
## qqplotr	NA
## qra	NA
## quadprog	NA
## quantreg	NA
## R.cache	NA
## R.methodsS3	NA
## R.oo	NA
## R.rsp	NA
## R.utils	NA
## RandomFields	NA
## RandomFieldsUtils	NA
## RANN	NA
## rappdirs	NA
## raster	NA

## rbibutils	NA
## Rcgmin	NA
## rcmdcheck	NA
## RColorBrewer	NA
## RcppArmadillo	NA
## RcppEigen	NA
## RcppFaddeeva	NA
## RcppGSL	NA
## RcppParallel	NA
## RcppZiggurat	NA
## Rdpack	NA
## readr	NA
## readxl	NA
## recipes	NA
## registry	NA
## regsem	NA
## rematch	NA
## remotes	NA
## reportr	NA
## reprex	NA
## reshape	NA
## reshape2	NA
## reticulate	NA
## revdepcheck	NA
## rex	NA
## Rfast	NA
## rgeos	NA
## rgho	NA
## rgl	"waldo"
## rio	NA
## rms	NA
## rncl	NA
## RNeXML	NA
## rngtools	NA
## robustbase	"robustX, rrcov, matrixStats, quantreg, Hmisc"
## robustlmm	NA
## rockchalk	NA
## roptim	NA
## roxygen2	NA
## rpf	NA
## rr2	NA
## rrBLUP	NA
## rsconnect	NA
## Rsolnp	NA
## RSpectra	NA
## RSQLite	NA
## rstan	NA
## rstanarm	NA
## rstantools	NA
## rstatix	NA
## rstpm2	NA
## Rtsne	NA
## RUnit	NA
## rvcheck	NA

## rversions	NA
## rvest	NA
## Rvmmmin	NA
## Ryacas	NA
## s2	NA
## sandwich	NA
## sass	NA
## scales	NA
## scatterpie	NA
## scatterplot3d	NA
## segmented	NA
## selectr	NA
## sem	NA
## semEff	NA
## semPlot	NA
## seqinr	NA
## sessioninfo	NA
## setRNG	NA
## sf	NA
## shape	NA
## shiny	NA
## shinyBS	NA
## shinycssloaders	NA
## shinyjs	NA
## shinystan	NA
## shinythemes	NA
## sn	NA
## sna	NA
## snow	NA
## snowfall	NA
## soma	NA
## sourcetools	NA
## sp	NA
## spacetime	NA
## spam	NA
## SparseM	NA
## spData	NA
## spdep	NA
## splancs	NA
## SQUAREM	NA
## stabledist	NA
## StanHeaders	NA
## statespacer	NA
## statmod	NA
## statnet.common	NA
## subplex	NA
## SurvCorr	NA
## survey	NA
## svglite	NA
## sys	NA
## tcltk2	NA
## tensorflow	NA
## testDriveR	NA
## tfruns	NA

## TH.data	NA
## threejs	"knitr, shiny"
## tidyr	NA
## tidyselect	NA
## tidyverse	NA
## timeDate	NA
## timereg	NA
## timeSeries	NA
## tkrplot	NA
## TMB	NA
## tmvnsim	NA
## tmvtnorm	NA
## transport	NA
## triangle	NA
## truncnorm	NA
## tweenr	NA
## ucminf	NA
## umap	NA
## units	NA
## unmarked	NA
## usethis	NA
## VCA	NA
## vegan	NA
## VGAM	"VGAMdata"
## vipor	NA
## viridis	NA
## viridisLite	NA
## visNetwork	NA
## webshot	NA
## whisker	NA
## whoami	NA
## wk	NA
## XML	NA
## xopen	NA
## xtable	NA
## xts	NA
## YieldCurve	NA
## zeallot	NA
## zipfR	NA
## zoo	NA
## base64enc	"png"
## brio	NA
## cairoDevice	NA
## callr	NA
## cli	NA
## cpp11	NA
## crayon	NA
## curl	NA
## data.table	NA
## desc	NA
## diffobj	NA
## digest	NA
## ellipsis	NA
## evaluate	NA

```

## fansi NA
## flextable NA
## fontBitstreamVera NA
## fontLiberation NA
## fontquiver NA
## freetypeharfbuzz NA
## gdtools NA
## glue NA
## gmp NA
## highr NA
## htmltools "knitr"
## htmlwidgets "shiny (>= 1.1)"
## jsonlite NA
## knitr NA
## lifecycle NA
## magrittr NA
## markdown NA
## mime NA
## officer NA
## pillar NA
## pkgconfig NA
## pkgload NA
## praise NA
## processx NA
## ps NA
## R6 NA
## Rcpp NA
## rematch2 NA
## rJava NA
## rjson NA
## rJython NA
## rlang "winch"
## rmarkdown NA
## Rmpfr "dfoptim, pracma"
## rprojroot NA
## rstudioapi NA
## rSymPy NA
## stringi NA
## stringr NA
## systemfonts NA
## testthat NA
## tibble NA
## tinytex NA
## utf8 NA
## uuid NA
## V8 NA
## vctrs NA
## waldo NA
## withr NA
## xfun NA
## xml2 NA
## yaml NA
## zip NA
## base NA

```

## boot	NA	
## class	NA	
## cluster	NA	
## codetools	NA	
## compiler	NA	
## datasets	NA	
## foreign	NA	
## graphics	NA	
## grDevices	NA	
## grid	NA	
## KernSmooth	NA	
## lattice	"chron"	
## MASS	NA	
## Matrix	"MatrixModels, graph, SparseM, sfsmisc, igraph, maptools, sp,\nspdep"	
## methods	NA	
## mgcv	NA	
## nlme	NA	
## nnet	NA	
## parallel	"snow, nws, Rmpi"	
## rpart	NA	
## spatial	NA	
## splines	NA	
## stats	NA	
## stats4	NA	
## survival	NA	
## tcltk	NA	
## tools	NA	
## utils	NA	
##	License	License_is_FOSS
## abind	"LGPL (>= 2)"	NA
## ade4	"GPL (>= 2)"	NA
## adegenet	"GPL (>= 2)"	NA
## ADGofTest	"GPL"	NA
## afex	"GPL (>= 2)"	NA
## AICcmodavg	"GPL (>= 2)"	NA
## AlphaBeta	"GPL-3"	NA
## ape	"GPL-2   GPL-3"	NA
## arm	"GPL (> 2)"	NA
## askpass	"MIT + file LICENSE"	NA
## assertthat	"GPL-3"	NA
## backports	"GPL-2   GPL-3"	NA
## bayesplot	"GPL (>= 3)"	NA
## BB	"GPL-3"	NA
## bbmle	"GPL"	NA
## BCEA	"GPL (>= 2)"	NA
## bdsmatrix	"LGPL-2"	NA
## beeswarm	"Artistic-2.0"	NA
## benchmarkme	"GPL-2   GPL-3"	NA
## benchmarkmeData	"GPL-2   GPL-3"	NA
## BH	"BSL-1.0"	NA
## Biobase	"Artistic-2.0"	NA
## BiocGenerics	"Artistic-2.0"	NA
## BiocManager	"Artistic-2.0"	NA
## BiocParallel	"GPL-2   GPL-3"	NA

## BiocVersion	"Artistic-2.0"	NA
## bit	"GPL-2   GPL-3"	NA
## bit64	"GPL-2   GPL-3"	NA
## blob	"GPL-3"	NA
## Bolstad2	"GPL (>= 2)"	NA
## bookdown	"GPL-3"	NA
## brew	"GPL-2"	NA
## bridgesampling	"GPL (>= 2)"	NA
## brms	"GPL-2"	NA
## Brodningnag	"GPL"	NA
## broom	"MIT + file LICENSE"	NA
## bslib	"MIT + file LICENSE"	NA
## cachem	"MIT + file LICENSE"	NA
## car	"GPL (>= 2)"	NA
## caracas	"GPL"	NA
## carData	"GPL (>= 2)"	NA
## caret	"GPL (>= 2)"	NA
## ccccd	"GPL (>= 2)"	NA
## cellranger	"MIT + file LICENSE"	NA
## checkmate	"BSD_3_clause + file LICENSE"	NA
## classInt	"GPL (>= 2)"	NA
## cli	"MIT + file LICENSE"	NA
## clipr	"GPL-3"	NA
## clisymbols	"MIT + file LICENSE"	NA
## clusterPower	"GPL (>= 2)"	NA
## coda	"GPL (>= 2)"	NA
## coin	"GPL-2"	NA
## colorspace	"BSD_3_clause + file LICENSE"	NA
## colourpicker	"MIT + file LICENSE"	NA
## combinat	"GPL-2"	NA
## commonmark	"BSD_2_clause + file LICENSE"	NA
## config	"GPL-3"	NA
## conquer	"GPL-3"	NA
## contfrac	"GPL-2"	NA
## copula	"GPL (>= 3)   file LICENSE"	NA
## coRanking	"GPL-3   file LICENSE"	NA
## corpcor	"GPL (>= 3)"	NA
## corrplot	"MIT + file LICENSE"	NA
## covr	"GPL-3"	NA
## cowplot	"GPL-2"	NA
## crancache	"MIT + file LICENSE"	NA
## cranlike	"GPL (>= 2)"	NA
## credentials	"MIT + file LICENSE"	NA
## crosstalk	"MIT + file LICENSE"	NA
## CRTSize	"GPL (>= 2)"	NA
## cubature	"GPL-3"	NA
## curl	"MIT + file LICENSE"	NA
## CVST	"GPL (>= 2.0)"	NA
## DAAG	"GPL-3"	NA
## DBI	"LGPL (>= 2.1)"	NA
## dbplyr	"MIT + file LICENSE"	NA
## debugme	"MIT + file LICENSE"	NA
## deldir	"GPL (>= 2)"	NA
## DEoptimR	"GPL (>= 2)"	NA

## Deriv	"GPL (>= 3)"	NA
## deSolve	"GPL (>= 2)"	NA
## devtools	"MIT + file LICENSE"	NA
## dfoptim	"GPL (>= 2)"	NA
## DHARMa	"GPL (>= 3)"	NA
## diagram	"GPL (>= 2)"	NA
## diffusionMap	"GPL-3"	NA
## dimRed	"GPL-3   file LICENSE"	NA
## doParallel	"GPL-2"	NA
## dotCall64	"GPL (>= 2)"	NA
## dplyr	"MIT + file LICENSE"	NA
## DRR	"GPL-3   file LICENSE"	NA
## DT	"GPL-3   file LICENSE"	NA
## dtplyr	"MIT + file LICENSE"	NA
## dygraphs	"MIT + file LICENSE"	NA
## e1071	"GPL-2   GPL-3"	NA
## effects	"GPL (>= 2)"	NA
## eha	"GPL (>= 2)"	NA
## ellipse	"GPL (>= 2)"	NA
## elliptic	"GPL-2"	NA
## emdbook	"GPL"	NA
## emmeans	"GPL-2   GPL-3"	NA
## energy	"GPL (>= 2)"	NA
## epiphy	"MIT + file LICENSE"	NA
## estimability	"GPL (>= 3)"	NA
## expm	"GPL (>= 2)"	NA
## ez	"GPL (>= 2)"	NA
## ezsim	"GPL (>= 2)"	NA
## farver	"MIT + file LICENSE"	NA
## fastGHQuad	"MIT + file LICENSE"	NA
## fastICA	"GPL-2   GPL-3"	NA
## fastmap	"MIT + file LICENSE"	NA
## fastmatch	"GPL-2"	NA
## fBasics	"GPL (>= 2)"	NA
## fdrtool	"GPL (>= 3)"	NA
## fields	"GPL (>= 2)"	NA
## fitODBOD	"GPL-2"	NA
## flexsurv	"GPL (>= 2)"	NA
## FNN	"GPL (>= 2)"	NA
## fOptions	"GPL (>= 2)"	NA
## forcats	"MIT + file LICENSE"	NA
## foreach	"Apache License (== 2.0)"	NA
## formatR	"GPL"	NA
## Formula	"GPL-2   GPL-3"	NA
## freetypeharfbuzz	"GPL-3   file LICENSE"	NA
## fs	"GPL-3"	NA
## futile.logger	"LGPL-3"	NA
## futile.options	"LGPL-3"	NA
## future	"LGPL (>= 2.1)"	NA
## future.apply	"GPL (>= 2)"	NA
## GA	"GPL (>= 2)"	NA
## gamlss	"GPL-2   GPL-3"	NA
## gamlss.data	"GPL-2   GPL-3"	NA
## gamlss.dist	"GPL-2   GPL-3"	NA



## gamm4	"GPL (>= 2)"	NA
## gap	"GPL (>= 2)"	NA
## gargle	"MIT + file LICENSE"	NA
## gdata	"GPL-2"	NA
## geepack	"GPL (>= 3)"	NA
## generics	"MIT + file LICENSE"	NA
## GenSA	"GPL-2"	NA
## geoR	"GPL (>= 2)"	NA
## gert	"MIT + file LICENSE"	NA
## ggbeeswarm	"GPL (>= 2)"	NA
## ggforce	"MIT + file LICENSE"	NA
## ggplot2	"MIT + file LICENSE"	NA
## ggpol	"MIT + file LICENSE"	NA
## ggpubr	"GPL-2"	NA
## ggrepel	"GPL-3   file LICENSE"	NA
## ggResidpanel	"MIT + file LICENSE"	NA
## ggribes	"GPL-2   file LICENSE"	NA
## ggsci	"GPL-3   file LICENSE"	NA
## ggsignif	"GPL-3"	NA
## gh	"MIT + file LICENSE"	NA
## ghyp	"GPL (>= 2)"	NA
## gitcreds	"MIT + file LICENSE"	NA
## glasso	"GPL-2"	NA
## glmmTMB	"AGPL-3"	NA
## glmnet	"GPL-2"	NA
## globals	"LGPL (>= 2.1)"	NA
## gmailr	"MIT + file LICENSE"	NA
## gmm	"GPL (>= 2)"	NA
## gmodels	"GPL-2"	NA
## googledrive	"MIT + file LICENSE"	NA
## googlesheets4	"MIT + file LICENSE"	NA
## gower	"GPL-3"	NA
## graphicalVAR	"GPL (>= 2)"	NA
## gridBase	"GPL"	NA
## gridExtra	"GPL (>= 2)"	NA
## gsl	"GPL-3"	NA
## gss	"GPL (>= 2)"	NA
## gstat	"GPL (>= 2.0)"	NA
## gtable	"GPL-2"	NA
## gtools	"GPL-2"	NA
## haplotypes	"GPL-2"	NA
## haven	"MIT + file LICENSE"	NA
## heemod	"GPL (>= 3)"	NA
## here	"MIT + file LICENSE"	NA
## Hmisc	"GPL (>= 2)"	NA
## hms	"MIT + file LICENSE"	NA
## HSAUR3	"GPL-2"	NA
## htmlTable	"GPL (>= 3)"	NA
## httpuv	"GPL (>= 2)   file LICENSE"	NA
## httr	"MIT + file LICENSE"	NA
## hypergeo	"GPL-2"	NA
## ids	"MIT + file LICENSE"	NA
## igraph	"GPL (>= 2)"	NA
## ini	"GPL-3"	NA

## inline	"LGPL"	NA
## insight	"GPL-3"	NA
## intervals	"Artistic-2.0"	NA
## ipred	"GPL (>= 2)"	NA
## IsingSampler	"GPL-2"	NA
## ISLR	"GPL-2"	NA
## isoband	"MIT + file LICENSE"	NA
## iterators	"Apache License (== 2.0)"	NA
## Jmisc	"GPL (>= 2)"	NA
## jpeg	"GPL-2   GPL-3"	NA
## jquerylib	"MIT + file LICENSE"	NA
## jtools	"MIT + file LICENSE"	NA
## kableExtra	"MIT + file LICENSE"	NA
## keras	"MIT + file LICENSE"	NA
## kernlab	"GPL-2"	NA
## kutils	"GPL-2"	NA
## labeling	"MIT + file LICENSE   Unlimited"	NA
## lambda.r	"LGPL-3"	NA
## languageR	"GPL (>= 2)"	NA
## later	"MIT + file LICENSE"	NA
## latticeExtra	"GPL (>= 2)"	NA
## lava	"GPL-3"	NA
## lavaan	"GPL (>= 2)"	NA
## lavaSearch2	"GPL-3"	NA
## lazyeval	"GPL-3"	NA
## lbfgs	"GPL (>= 2)"	NA
## lbfgsb3c	"GPL-2"	NA
## LearnBayes	"GPL (>= 2)"	NA
## libcoin	"GPL-2"	NA
## lisrelToR	"GPL-2"	NA
## listenv	"LGPL (>= 2.1)"	NA
## lle	"GPL-3"	NA
## lme4	"GPL (>= 2)"	NA
## lmerTest	"GPL (>= 2)"	NA
## lmtest	"GPL-2   GPL-3"	NA
## loe	"GPL (>= 2)"	NA
## logitnorm	"GPL-2"	NA
## loo	"GPL (>= 3)"	NA
## lpSolve	"LGPL-2"	NA
## lubridate	"GPL (>= 2)"	NA
## manipulateWidget	"GPL (>= 2)   file LICENSE"	NA
## maps	"GPL-2"	NA
## maptools	"GPL (>= 2)"	NA
## MASS	"GPL-2   GPL-3"	NA
## mathjaxr	"GPL-3"	NA
## matrixcalc	"GPL (>= 2)"	NA
## MatrixModels	"GPL (>= 2)"	NA
## matrixStats	"Artistic-2.0"	NA
## memoise	"MIT + file LICENSE"	NA
## MEMSS	"GPL (>= 2)"	NA
## metaSEM	"GPL (>= 2)"	NA
## mets	"GPL (>= 2)"	NA
## mi	"GPL (>= 2)"	NA
## microbenchmark	"BSD_2_clause + file LICENSE"	NA

## miniUI	"GPL-3"	NA
## minpack.lm	"GPL-3"	NA
## minqa	"GPL-2"	NA
## mitools	"GPL-2"	NA
## mixmeta	"GPL (>= 2)"	NA
## mlmRev	"GPL (>= 2)"	NA
## mnormt	"GPL-2   GPL-3"	NA
## ModelMetrics	"GPL (>= 2)"	NA
## modelr	"GPL-3"	NA
## modeltools	"GPL-2"	NA
## moments	"GPL (>= 2)"	NA
## msm	"GPL (>= 2)"	NA
## mstate	"GPL (>= 2)"	NA
## muhaz	"GPL"	NA
## multcomp	"GPL-2"	NA
## MuMIn	"GPL-2"	NA
## munsell	"MIT + file LICENSE"	NA
## mvmeta	"GPL (>= 2)"	NA
## mvnfast	"GPL (>= 2.0)"	NA
## mvtnorm	"GPL-2"	NA
## network	"GPL (>= 2)"	NA
## NlcOptim	"GPL-3"	NA
## nleqslv	"GPL (>= 2)"	NA
## nlmt	"GPL-2"	NA
## nloptr	"LGPL-3"	NA
## nlsalt	"GPL-2"	NA
## nlspkg	"GPL-2, GPL-3"	NA
## nlsv	"GPL-2"	NA
## NMF	"GPL (>= 2)"	NA
## numDeriv	"GPL-2"	NA
## OpenMx	"Apache License (== 2.0)"	NA
## openssl	"MIT + file LICENSE"	NA
## openxlsx	"MIT + file LICENSE"	NA
## optextras	"GPL-2"	NA
## optimx	"GPL-2"	NA
## ore	"BSD_3_clause + file LICENSE"	NA
## packrat	"GPL-2"	NA
## pandoc	"AGPL-3   file LICENSE"	NA
## parallelly	"LGPL (>= 2.1)"	NA
## parfm	"GPL-2"	NA
## parsedate	"GPL-2"	NA
## pbapply	"GPL-2"	NA
## pbivnorm	"GPL (>= 2)"	NA
## pbkrtest	"GPL (>= 2)"	NA
## pbmcapply	"MIT + file LICENSE"	NA
## pbv	"GPL (>= 2)"	NA
## pcaL1	"GPL (>= 3)"	NA
## pcaPP	"GPL (>= 3)"	NA
## pegas	"GPL (>= 2)"	NA
## permute	"GPL-2"	NA
## phangorn	"GPL (>= 2)"	NA
## phylobase	"GPL (>= 2)"	NA
## phylolm	"GPL (>= 2)   file LICENSE"	NA
## pixmap	"GPL-2"	NA

## pkgbuild	"MIT + file LICENSE"	NA
## pkgmaker	"GPL (>= 2)"	NA
## PKPDmodels	"GPL (>= 2)"	NA
## plogr	"MIT + file LICENSE"	NA
## plotly	"MIT + file LICENSE"	NA
## plotrix	"GPL (>= 2)"	NA
## plyr	"MIT + file LICENSE"	NA
## png	"GPL-2   GPL-3"	NA
## polyspline	"GPL (>= 2)"	NA
## polyclip	"BSL"	NA
## polycor	"GPL (>= 2)"	NA
## polynom	"GPL-2"	NA
## prettydoc	"Apache License (>= 2.0)"	NA
## prettyunits	"MIT + file LICENSE"	NA
## pROC	"GPL (>= 3)"	NA
## prodlim	"GPL (>= 2)"	NA
## progress	"MIT + file LICENSE"	NA
## projpred	"GPL-3"	NA
## promises	"MIT + file LICENSE"	NA
## proxy	"GPL-2"	NA
## pryr	"GPL-2"	NA
## pso	"LGPL-3"	NA
## pspline	"Unlimited"	NA
## psych	"GPL (>= 2)"	NA
## psychTools	"GPL (>= 2)"	NA
## purrr	"GPL-3   file LICENSE"	NA
## qgam	"GPL (>= 2)"	NA
## qgraph	"GPL-2"	NA
## qqplotr	"GPL-3   file LICENSE"	NA
## qra	"GPL-3"	NA
## quadprog	"GPL (>= 2)"	NA
## quantreg	"GPL (>= 2)"	NA
## R.cache	"LGPL (>= 2.1)"	NA
## R.methodsS3	"LGPL (>= 2.1)"	NA
## R.oo	"LGPL (>= 2.1)"	NA
## R.rsp	"LGPL (>= 2.1)"	NA
## R.utils	"LGPL (>= 2.1)"	NA
## RandomFields	"GPL (>= 3)"	NA
## RandomFieldsUtils	"GPL (>= 3)"	NA
## RANN	"GPL (>= 3)"	NA
## rappdirs	"MIT + file LICENSE"	NA
## raster	"GPL (>= 3)"	NA
## rbibutils	"GPL-2"	NA
## Rcgmin	"GPL (>= 2)"	NA
## rcmdcheck	"MIT + file LICENSE"	NA
## RColorBrewer	"Apache License 2.0"	NA
## RcppArmadillo	"GPL (>= 2)"	NA
## RcppEigen	"GPL (>= 2)   file LICENSE"	NA
## RcppFaddeeva	"GPL (>= 2)"	NA
## RcppGSL	"GPL (>= 2)"	NA
## RcppParallel	"GPL (>= 2)"	NA
## RcppZigurat	"GPL (>= 2)"	NA
## Rdpack	"GPL (>= 2)"	NA
## readr	"GPL (>= 2)   file LICENSE"	NA

## readxl	"GPL-3"	NA
## recipes	"MIT + file LICENSE"	NA
## registry	"GPL-2"	NA
## regsem	"GPL (>= 2)"	NA
## rematch	"MIT + file LICENSE"	NA
## remotes	"MIT + file LICENSE"	NA
## reportr	"GPL-2"	NA
## reprec	"MIT + file LICENSE"	NA
## reshape	"MIT + file LICENSE"	NA
## reshape2	"MIT + file LICENSE"	NA
## reticulate	"Apache License 2.0"	NA
## revdepcheck	"MIT + file LICENSE"	NA
## rex	"MIT + file LICENSE"	NA
## Rfast	"GPL (>= 2.0)"	NA
## rgeos	"GPL (>= 2)"	NA
## rggho	"GPL (>= 3)"	NA
## rgl	"GPL"	NA
## rio	"GPL-2"	NA
## rms	"GPL (>= 2)"	NA
## rncl	"BSD_2_clause + file LICENSE"	NA
## RNeXML	"BSD_3_clause + file LICENSE"	NA
## rngtools	"GPL-3"	NA
## robustbase	"GPL (>= 2)"	NA
## robustlmm	"GPL-2"	NA
## rockchalk	"GPL (>= 3.0)"	NA
## roptim	"GPL (>= 2)"	NA
## roxygen2	"GPL (>= 2)"	NA
## rpf	"GPL (>= 3)"	NA
## rr2	"GPL-3"	NA
## rrBLUP	"GPL-3"	NA
## rsconnect	"GPL-2"	NA
## Rsolnp	"GPL"	NA
## RSpectra	"MPL (>= 2)"	NA
## RSQLite	"LGPL (>= 2.1)"	NA
## rstan	"GPL (>= 3)"	NA
## rstanarm	"GPL (>= 3)"	NA
## rstantools	"GPL (>= 3)"	NA
## rstatix	"GPL-2"	NA
## rstpm2	"GPL-2   GPL-3"	NA
## Rtsne	"file LICENSE"	"yes"
## RUnit	"GPL-2"	NA
## rvcheck	"Artistic-2.0"	NA
## rversions	"MIT + file LICENSE"	NA
## rvest	"MIT + file LICENSE"	NA
## Rvmmmin	"GPL (>= 2)"	NA
## Ryacas	"GPL"	NA
## s2	"Apache License (== 2.0)"	NA
## sandwich	"GPL-2   GPL-3"	NA
## sass	"MIT + file LICENSE"	NA
## scales	"MIT + file LICENSE"	NA
## scatterpie	"Artistic-2.0"	NA
## scatterplot3d	"GPL-2"	NA
## segmented	"GPL"	NA
## selectr	"BSD_3_clause + file LICENCE"	NA

## sem	"GPL (>= 2)"	NA
## semEff	"GPL-3"	NA
## semPlot	"GPL-2"	NA
## seqinr	"GPL (>= 2)"	NA
## sessioninfo	"GPL-2"	NA
## setRNG	"GPL-2   file LICENSE"	NA
## sf	"GPL-2   MIT + file LICENSE"	NA
## shape	"GPL (>= 3)"	NA
## shiny	"GPL-3   file LICENSE"	NA
## shinyBS	"GPL-3"	NA
## shinycssloaders	"MIT + file LICENSE"	NA
## shinyjs	"MIT + file LICENSE"	NA
## shinystan	"GPL (>= 3)"	NA
## shinythemes	"GPL-3   file LICENSE"	NA
## sn	"GPL-2   GPL-3"	NA
## sna	"GPL (>= 2)"	NA
## snow	"GPL"	NA
## snowfall	"GPL"	NA
## soma	"GPL-2"	NA
## sourcetools	"MIT + file LICENSE"	NA
## sp	"GPL (>= 2)"	NA
## spacetime	"GPL (>= 2)"	NA
## spam	"LGPL-2   BSD_3_clause + file LICENSE"	NA
## SparseM	"GPL (>= 2)"	NA
## spData	"CC0"	NA
## spdep	"GPL (>= 2)"	NA
## splancs	"GPL (>= 2)"	NA
## SQUAREM	"GPL (>= 2)"	NA
## stabledist	"GPL (>= 2)"	NA
## StanHeaders	"BSD_3_clause + file LICENSE"	NA
## statespacer	"MIT + file LICENSE"	NA
## statmod	"GPL-2   GPL-3"	NA
## statnet.common	"GPL-3 + file LICENSE"	NA
## subplex	"GPL-3"	NA
## SurvCorr	"GPL"	NA
## survey	"GPL-2   GPL-3"	NA
## svglite	"GPL (>= 2)"	NA
## sys	"MIT + file LICENSE"	NA
## tcltk2	"LGPL-3 + file LICENSE"	NA
## tensorflow	"Apache License 2.0"	NA
## testDriveR	"GPL-3"	NA
## tfruns	"Apache License 2.0"	NA
## TH.data	"GPL-3"	NA
## threejs	"MIT + file LICENSE"	NA
## tidyr	"MIT + file LICENSE"	NA
## tidyselect	"MIT + file LICENSE"	NA
## tidyverse	"MIT + file LICENSE"	NA
## timeDate	"GPL (>= 2)"	NA
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## timeSeries	"GPL (>= 2)"	NA
## tkrplot	"GPL"	NA
## TMB	"GPL-2"	NA
## tmvnsim	"GPL-2"	NA
## tmvtnorm	"GPL (>= 2)"	NA

## transport	"GPL (>= 2)"	NA
## triangle	"GPL (>= 2)"	NA
## truncnorm	"GPL (>= 2)"	NA
## tweenr	"MIT + file LICENSE"	NA
## ucminf	"GPL (>= 2)"	NA
## umap	"MIT + file LICENSE"	NA
## units	"GPL-2"	NA
## unmarked	"GPL (>= 3)"	NA
## usethis	"MIT + file LICENSE"	NA
## VCA	"GPL (>= 3)"	NA
## vegan	"GPL-2"	NA
## VGAM	"GPL-3"	NA
## vipor	"GPL (>= 2)"	NA
## viridis	"MIT + file LICENSE"	NA
## viridisLite	"MIT + file LICENSE"	NA
## visNetwork	"MIT + file LICENSE"	NA
## webshot	"GPL-2"	NA
## whisker	"GPL-3"	NA
## whoami	"MIT + file LICENSE"	NA
## wk	"MIT + file LICENSE"	NA
## XML	"BSD_3_clause + file LICENSE"	NA
## xopen	"MIT + file LICENSE"	NA
## xtable	"GPL (>= 2)"	NA
## xts	"GPL (>= 2)"	NA
## YieldCurve	"GPL (>= 2)"	NA
## zeallot	"MIT + file LICENSE"	NA
## zipfR	"GPL-3"	NA
## zoo	"GPL-2   GPL-3"	NA
## base64enc	"GPL-2   GPL-3"	NA
## brio	"MIT + file LICENSE"	NA
## cairoDevice	"GPL"	NA
## callr	"MIT + file LICENSE"	NA
## cli	"MIT + file LICENSE"	NA
## cpp11	"MIT + file LICENSE"	NA
## crayon	"MIT + file LICENSE"	NA
## curl	"MIT + file LICENSE"	NA
## data.table	"MPL-2.0   file LICENSE"	NA
## desc	"MIT + file LICENSE"	NA
## diffobj	"GPL (>= 2)"	NA
## digest	"GPL (>= 2)"	NA
## ellipsis	"MIT + file LICENSE"	NA
## evaluate	"MIT + file LICENSE"	NA
## fansi	"GPL (>= 2)"	NA
## flextable	"GPL-3"	NA
## fontBitstreamVera	"file LICENCE"	"yes"
## fontLiberation	"file LICENSE"	"yes"
## fontquiver	"GPL-3   file LICENSE"	NA
## freetypeharfbuzz	"GPL-3   file LICENSE"	NA
## gdtools	"GPL-3   file LICENSE"	NA
## glue	"MIT + file LICENSE"	NA
## gmp	"GPL (>= 2)"	NA
## highr	"GPL"	NA
## htmltools	"GPL (>= 2)"	NA
## htmlwidgets	"MIT + file LICENSE"	NA

## jsonlite	"MIT + file LICENSE"	NA
## knitr	"GPL"	NA
## lifecycle	"MIT + file LICENSE"	NA
## magrittr	"MIT + file LICENSE"	NA
## markdown	"GPL-2"	NA
## mime	"GPL"	NA
## officer	"GPL-3"	NA
## pillar	"MIT + file LICENSE"	NA
## pkgconfig	"MIT + file LICENSE"	NA
## pkgload	"GPL-3"	NA
## praise	"MIT + file LICENSE"	NA
## processx	"MIT + file LICENSE"	NA
## ps	"MIT + file LICENSE"	NA
## R6	"MIT + file LICENSE"	NA
## Rcpp	"GPL (>= 2)"	NA
## rematch2	"MIT + file LICENSE"	NA
## rJava	"LGPL-2.1"	NA
## rjson	"GPL-2"	NA
## rJython	"GPL (>= 2)"	NA
## rlang	"MIT + file LICENSE"	NA
## rmarkdown	"GPL-3"	NA
## Rmpfr	"GPL (>= 2)"	NA
## rprojroot	"MIT + file LICENSE"	NA
## rstudioapi	"MIT + file LICENSE"	NA
## rSymPy	"GPL"	NA
## stringi	"file LICENSE"	"yes"
## stringr	"GPL-2   file LICENSE"	NA
## systemfonts	"MIT + file LICENSE"	NA
## testthat	"MIT + file LICENSE"	NA
## tibble	"MIT + file LICENSE"	NA
## tinytex	"MIT + file LICENSE"	NA
## utf8	"Apache License (== 2.0)   file LICENSE"	NA
## uuid	"MIT + file LICENSE"	NA
## V8	"MIT + file LICENSE"	NA
## vctrs	"MIT + file LICENSE"	NA
## waldo	"MIT + file LICENSE"	NA
## withr	"MIT + file LICENSE"	NA
## xfun	"MIT + file LICENSE"	NA
## xml2	"GPL (>= 2)"	NA
## yaml	"BSD_3_clause + file LICENSE"	NA
## zip	"MIT + file LICENSE"	NA
## base	"Part of R 4.1.0"	NA
## boot	"Unlimited"	NA
## class	"GPL-2   GPL-3"	NA
## cluster	"GPL (>= 2)"	NA
## codetools	"GPL"	NA
## compiler	"Part of R 4.1.0"	NA
## datasets	"Part of R 4.1.0"	NA
## foreign	"GPL (>= 2)"	NA
## graphics	"Part of R 4.1.0"	NA
## grDevices	"Part of R 4.1.0"	NA
## grid	"Part of R 4.1.0"	NA
## KernSmooth	"Unlimited"	NA
## lattice	"GPL (>= 2)"	NA



## MASS	"GPL-2   GPL-3"	NA
## Matrix	"GPL (>= 2)   file LICENCE"	NA
## methods	"Part of R 4.1.0"	NA
## mgcv	"GPL (>= 2)"	NA
## nlme	"GPL (>= 2)   file LICENCE"	NA
## nnet	"GPL-2   GPL-3"	NA
## parallel	"Part of R 4.1.0"	NA
## rpart	"GPL-2   GPL-3"	NA
## spatial	"GPL-2   GPL-3"	NA
## splines	"Part of R 4.1.0"	NA
## stats	"Part of R 4.1.0"	NA
## stats4	"Part of R 4.1.0"	NA
## survival	"LGPL (>= 2)"	NA
## tcltk	"Part of R 4.1.0"	NA
## tools	"Part of R 4.1.0"	NA
## utils	"Part of R 4.1.0"	NA
##	License_restricts_use OS_type MD5sum NeedsCompilation Built	
## abind	NA NA NA	"no" "4.1.0"
## ade4	NA NA NA	"yes" "4.1.0"
## adegenet	NA NA NA	"yes" "4.1.0"
## ADGofTest	NA NA NA	NA "4.1.0"
## afex	NA NA NA	"no" "4.1.0"
## AICcmodavg	NA NA NA	"no" "4.1.0"
## AlphaBeta	NA NA NA	"no" "4.1.0"
## ape	NA NA NA	"yes" "4.1.0"
## arm	NA NA NA	"no" "4.1.0"
## askpass	NA NA NA	"yes" "4.1.0"
## assertthat	NA NA NA	"no" "4.1.0"
## backports	NA NA NA	"yes" "4.1.0"
## bayesplot	NA NA NA	"no" "4.1.0"
## BB	NA NA NA	"no" "4.1.0"
## bbmle	NA NA NA	"no" "4.1.0"
## BCEA	NA NA NA	"no" "4.1.0"
## bdsmatrix	NA NA NA	"yes" "4.1.0"
## beeswarm	NA NA NA	"yes" "4.1.0"
## benchmarkme	NA NA NA	"no" "4.1.0"
## benchmarkmeData	NA NA NA	"no" "4.1.0"
## BH	NA NA NA	"no" "4.1.0"
## Biobase	NA NA NA	"yes" "4.1.0"
## BiocGenerics	NA NA NA	"no" "4.1.0"
## BiocManager	NA NA NA	"no" "4.1.0"
## BiocParallel	NA NA NA	"yes" "4.1.0"
## BiocVersion	NA NA NA	"no" "4.1.0"
## bit	NA NA NA	"yes" "4.1.0"
## bit64	NA NA NA	"yes" "4.1.0"
## blob	NA NA NA	"no" "4.1.0"
## Bolstad2	NA NA NA	"no" "4.1.0"
## bookdown	NA NA NA	"no" "4.1.0"
## brew	NA NA NA	NA "4.1.0"
## bridgesampling	NA NA NA	"no" "4.1.0"
## brms	NA NA NA	"no" "4.1.0"
## Brodningnag	NA NA NA	"no" "4.1.0"
## broom	NA NA NA	"no" "4.1.0"
## bslib	NA NA NA	"no" "4.1.0"

## cachem	NA	NA	NA	"yes"	"4.1.0"
## car	NA	NA	NA	"no"	"4.1.0"
## caracas	NA	NA	NA	"no"	"4.1.0"
## carData	NA	NA	NA	"no"	"4.1.0"
## caret	NA	NA	NA	"yes"	"4.1.0"
## ccccd	NA	NA	NA	"no"	"4.1.0"
## cellranger	NA	NA	NA	"no"	"4.1.0"
## checkmate	NA	NA	NA	"yes"	"4.1.0"
## classInt	NA	NA	NA	"yes"	"4.1.0"
## cli	NA	NA	NA	"yes"	"4.1.0"
## clipr	NA	NA	NA	"no"	"4.1.0"
## clisymbols	NA	NA	NA	"no"	"4.1.0"
## clusterPower	NA	NA	NA	"yes"	"4.1.0"
## coda	NA	NA	NA	"no"	"4.1.0"
## coin	NA	NA	NA	"yes"	"4.1.0"
## colorspace	NA	NA	NA	"yes"	"4.1.0"
## colourpicker	NA	NA	NA	"no"	"4.1.0"
## combinat	NA	NA	NA	NA	"4.1.0"
## commonmark	NA	NA	NA	"yes"	"4.1.0"
## config	NA	NA	NA	"no"	"4.1.0"
## conquer	NA	NA	NA	"yes"	"4.1.0"
## contfrac	NA	NA	NA	"yes"	"4.1.0"
## copula	NA	NA	NA	"yes"	"4.1.0"
## coRanking	NA	NA	NA	"yes"	"4.1.0"
## corpcor	NA	NA	NA	"no"	"4.1.0"
## corrplot	NA	NA	NA	"no"	"4.1.0"
## covr	NA	NA	NA	"yes"	"4.1.0"
## cowplot	NA	NA	NA	"no"	"4.1.0"
## crancache	NA	NA	NA	"no"	"4.1.0"
## cranlike	NA	NA	NA	"no"	"4.1.0"
## credentials	NA	NA	NA	"no"	"4.1.0"
## crosstalk	NA	NA	NA	"no"	"4.1.0"
## CRTSize	NA	NA	NA	"no"	"4.1.0"
## cubature	NA	NA	NA	"yes"	"4.1.0"
## curl	NA	NA	NA	"yes"	"4.1.0"
## CVST	NA	NA	NA	"no"	"4.1.0"
## DAAG	NA	NA	NA	"no"	"4.1.0"
## DBI	NA	NA	NA	"no"	"4.1.0"
## dbplyr	NA	NA	NA	"no"	"4.1.0"
## debugme	NA	NA	NA	"no"	"4.1.0"
## deldir	NA	NA	NA	"yes"	"4.1.0"
## DEoptimR	NA	NA	NA	"no"	"4.1.0"
## Deriv	NA	NA	NA	"no"	"4.1.0"
## deSolve	NA	NA	NA	"yes"	"4.1.0"
## devtools	NA	NA	NA	"no"	"4.1.0"
## dfoptim	NA	NA	NA	"no"	"4.1.0"
## DHARMa	NA	NA	NA	"no"	"4.1.0"
## diagram	NA	NA	NA	"no"	"4.1.0"
## diffusionMap	NA	NA	NA	"no"	"4.1.0"
## dimRed	NA	NA	NA	"yes"	"4.1.0"
## doParallel	NA	NA	NA	"no"	"4.1.0"
## dotCall64	NA	NA	NA	"yes"	"4.1.0"
## dplyr	NA	NA	NA	"yes"	"4.1.0"
## DRR	NA	NA	NA	"no"	"4.1.0"

## DT	NA	NA	NA	"no"	"4.1.0"
## dtplyr	NA	NA	NA	"no"	"4.1.0"
## dygraphs	NA	NA	NA	"no"	"4.1.0"
## e1071	NA	NA	NA	"yes"	"4.1.0"
## effects	NA	NA	NA	"no"	"4.1.0"
## eha	NA	NA	NA	"yes"	"4.1.0"
## ellipse	NA	NA	NA	"no"	"4.1.0"
## elliptic	NA	NA	NA	"no"	"4.1.0"
## emdbook	NA	NA	NA	"no"	"4.1.0"
## emmeans	NA	NA	NA	"no"	"4.1.0"
## energy	NA	NA	NA	"yes"	"4.1.0"
## epiphy	NA	NA	NA	"yes"	"4.1.0"
## estimability	NA	NA	NA	"no"	"4.1.0"
## expm	NA	NA	NA	"yes"	"4.1.0"
## ez	NA	NA	NA	"no"	"4.1.0"
## ezsim	NA	NA	NA	"no"	"4.1.0"
## farver	NA	NA	NA	"yes"	"4.1.0"
## fastGHQuad	NA	NA	NA	"yes"	"4.1.0"
## fastICA	NA	NA	NA	"yes"	"4.1.0"
## fastmap	NA	NA	NA	"yes"	"4.1.0"
## fastmatch	NA	NA	NA	"yes"	"4.1.0"
## fBasics	NA	NA	NA	"yes"	"4.1.0"
## fdrtool	NA	NA	NA	"yes"	"4.1.0"
## fields	NA	NA	NA	"yes"	"4.1.0"
## fitODBOD	NA	NA	NA	"no"	"4.1.0"
## flexsurv	NA	NA	NA	"yes"	"4.1.0"
## FNN	NA	NA	NA	"yes"	"4.1.0"
## fOptions	NA	NA	NA	"yes"	"4.1.0"
## forcats	NA	NA	NA	"no"	"4.1.0"
## foreach	NA	NA	NA	"no"	"4.1.0"
## formatR	NA	NA	NA	"no"	"4.1.0"
## Formula	NA	NA	NA	"no"	"4.1.0"
## freetypeharfbuzz	NA	NA	NA	"yes"	"4.1.0"
## fs	NA	NA	NA	"yes"	"4.1.0"
## futile.logger	NA	NA	NA	"no"	"4.1.0"
## futile.options	NA	NA	NA	"no"	"4.1.0"
## future	NA	NA	NA	"no"	"4.1.0"
## future.apply	NA	NA	NA	"no"	"4.1.0"
## GA	NA	NA	NA	"yes"	"4.1.0"
## gamlss	NA	NA	NA	"yes"	"4.1.0"
## gamlss.data	NA	NA	NA	"no"	"4.1.0"
## gamlss.dist	NA	NA	NA	"yes"	"4.1.0"
## gamm4	NA	NA	NA	"no"	"4.1.0"
## gap	NA	NA	NA	"yes"	"4.1.0"
## gargle	NA	NA	NA	"no"	"4.1.0"
## gdata	NA	NA	NA	"no"	"4.1.0"
## geepack	NA	NA	NA	"yes"	"4.1.0"
## generics	NA	NA	NA	"no"	"4.1.0"
## GenSA	NA	NA	NA	"yes"	"4.1.0"
## geoR	NA	NA	NA	"yes"	"4.1.0"
## gert	NA	NA	NA	"yes"	"4.1.0"
## ggbeeswarm	NA	NA	NA	"no"	"4.1.0"
## ggforce	NA	NA	NA	"yes"	"4.1.0"
## ggplot2	NA	NA	NA	"no"	"4.1.0"

## ggpol	NA	NA	NA	"no"	"4.1.0"
## ggpubr	NA	NA	NA	"no"	"4.1.0"
## ggrepel	NA	NA	NA	"yes"	"4.1.0"
## ggResidpanel	NA	NA	NA	"no"	"4.1.0"
## ggbridges	NA	NA	NA	"no"	"4.1.0"
## ggsci	NA	NA	NA	"no"	"4.1.0"
## ggsignif	NA	NA	NA	"no"	"4.1.0"
## gh	NA	NA	NA	"no"	"4.1.0"
## ghyp	NA	NA	NA	"yes"	"4.1.0"
## gitcreds	NA	NA	NA	"no"	"4.1.0"
## glasso	NA	NA	NA	"yes"	"4.1.0"
## glmmTMB	NA	NA	NA	"yes"	"4.1.0"
## glmnet	NA	NA	NA	"yes"	"4.1.0"
## globals	NA	NA	NA	"no"	"4.1.0"
## gmailr	NA	NA	NA	"no"	"4.1.0"
## gmm	NA	NA	NA	"yes"	"4.1.0"
## gmodels	NA	NA	NA	"no"	"4.1.0"
## googledrive	NA	NA	NA	"no"	"4.1.0"
## googlesheets4	NA	NA	NA	"no"	"4.1.0"
## gower	NA	NA	NA	"yes"	"4.1.0"
## graphicalVAR	NA	NA	NA	"yes"	"4.1.0"
## gridBase	NA	NA	NA	"no"	"4.1.0"
## gridExtra	NA	NA	NA	"no"	"4.1.0"
## gsl	NA	NA	NA	"yes"	"4.1.0"
## gss	NA	NA	NA	"yes"	"4.1.0"
## gstat	NA	NA	NA	"yes"	"4.1.0"
## gtable	NA	NA	NA	"no"	"4.1.0"
## gtools	NA	NA	NA	"yes"	"4.1.0"
## haplotypes	NA	NA	NA	"no"	"4.1.0"
## haven	NA	NA	NA	"yes"	"4.1.0"
## heemod	NA	NA	NA	"no"	"4.1.0"
## here	NA	NA	NA	"no"	"4.1.0"
## Hmisc	NA	NA	NA	"yes"	"4.1.0"
## hms	NA	NA	NA	"no"	"4.1.0"
## HSAUR3	NA	NA	NA	"no"	"4.1.0"
## htmlTable	NA	NA	NA	"no"	"4.1.0"
## httpuv	NA	NA	NA	"yes"	"4.1.0"
## httr	NA	NA	NA	"no"	"4.1.0"
## hypergeo	NA	NA	NA	"no"	"4.1.0"
## ids	NA	NA	NA	"no"	"4.1.0"
## igraph	NA	NA	NA	"yes"	"4.1.0"
## ini	NA	NA	NA	"no"	"4.1.0"
## inline	NA	NA	NA	"no"	"4.1.0"
## insight	NA	NA	NA	"no"	"4.1.0"
## intervals	NA	NA	NA	"yes"	"4.1.0"
## ipred	NA	NA	NA	"yes"	"4.1.0"
## IsingSampler	NA	NA	NA	"yes"	"4.1.0"
## ISLR	NA	NA	NA	"no"	"4.1.0"
## isoband	NA	NA	NA	"yes"	"4.1.0"
## iterators	NA	NA	NA	"no"	"4.1.0"
## Jmisc	NA	NA	NA	"no"	"4.1.0"
## jpeg	NA	NA	NA	"yes"	"4.1.0"
## jquerylib	NA	NA	NA	"no"	"4.1.0"
## jtools	NA	NA	NA	"no"	"4.1.0"

## kableExtra	NA	NA	NA	"no"	"4.1.0"
## keras	NA	NA	NA	"no"	"4.1.0"
## kernlab	NA	NA	NA	"yes"	"4.1.0"
## kutils	NA	NA	NA	"no"	"4.1.0"
## labeling	NA	NA	NA	"no"	"4.1.0"
## lambda.r	NA	NA	NA	"no"	"4.1.0"
## languageR	NA	NA	NA	"no"	"4.1.0"
## later	NA	NA	NA	"yes"	"4.1.0"
## latticeExtra	NA	NA	NA	"no"	"4.1.0"
## lava	NA	NA	NA	"no"	"4.1.0"
## lavaan	NA	NA	NA	"no"	"4.1.0"
## lavaSearch2	NA	NA	NA	"yes"	"4.1.0"
## lazyeval	NA	NA	NA	"yes"	"4.1.0"
## lbfgs	NA	NA	NA	"yes"	"4.1.0"
## lbfgsb3c	NA	NA	NA	"yes"	"4.1.0"
## LearnBayes	NA	NA	NA	"no"	"4.1.0"
## libcoin	NA	NA	NA	"yes"	"4.1.0"
## lisrelToR	NA	NA	NA	"no"	"4.1.0"
## listenv	NA	NA	NA	"no"	"4.1.0"
## lle	NA	NA	NA	NA	"4.1.0"
## lme4	NA	NA	NA	"yes"	"4.1.0"
## lmerTest	NA	NA	NA	"no"	"4.1.0"
## lmtest	NA	NA	NA	"yes"	"4.1.0"
## loe	NA	NA	NA	"yes"	"4.1.0"
## logitnorm	NA	NA	NA	"no"	"4.1.0"
## loo	NA	NA	NA	"no"	"4.1.0"
## lpSolve	NA	NA	NA	"yes"	"4.1.0"
## lubridate	NA	NA	NA	"yes"	"4.1.0"
## manipulateWidget	NA	NA	NA	"no"	"4.1.0"
## maps	NA	NA	NA	"yes"	"4.1.0"
## maptools	NA	NA	NA	"yes"	"4.1.0"
## MASS	NA	NA	NA	"yes"	"4.1.0"
## mathjaxr	NA	NA	NA	"yes"	"4.1.0"
## matrixcalc	NA	NA	NA	"no"	"4.1.0"
## MatrixModels	NA	NA	NA	"no"	"4.1.0"
## matrixStats	NA	NA	NA	"yes"	"4.1.0"
## memoise	NA	NA	NA	"no"	"4.1.0"
## MEMSS	NA	NA	NA	"no"	"4.1.0"
## metaSEM	NA	NA	NA	"no"	"4.1.0"
## mets	NA	NA	NA	"yes"	"4.1.0"
## mi	NA	NA	NA	"no"	"4.1.0"
## microbenchmark	NA	NA	NA	"yes"	"4.1.0"
## miniUI	NA	NA	NA	"no"	"4.1.0"
## minpack.lm	NA	NA	NA	"yes"	"4.1.0"
## minqa	NA	NA	NA	"yes"	"4.1.0"
## mitools	NA	NA	NA	"no"	"4.1.0"
## mixmeta	NA	NA	NA	"no"	"4.1.0"
## mlmRev	NA	NA	NA	"no"	"4.1.0"
## mnormt	NA	NA	NA	"yes"	"4.1.0"
## ModelMetrics	NA	NA	NA	"yes"	"4.1.0"
## modelr	NA	NA	NA	"no"	"4.1.0"
## modeltools	NA	NA	NA	"no"	"4.1.0"
## moments	NA	NA	NA	"no"	"4.1.0"
## msm	NA	NA	NA	"yes"	"4.1.0"

## mstate	NA	NA	NA	"yes"	"4.1.0"
## muhaz	NA	NA	NA	"yes"	"4.1.0"
## multcomp	NA	NA	NA	"no"	"4.1.0"
## MuMIn	NA	NA	NA	"no"	"4.1.0"
## munsell	NA	NA	NA	"no"	"4.1.0"
## mvmeta	NA	NA	NA	"no"	"4.1.0"
## mvnfast	NA	NA	NA	"yes"	"4.1.0"
## mvtnorm	NA	NA	NA	"yes"	"4.1.0"
## network	NA	NA	NA	"yes"	"4.1.0"
## Nlcoptim	NA	NA	NA	"no"	"4.1.0"
## nleqslv	NA	NA	NA	"yes"	"4.1.0"
## nlmrt	NA	NA	NA	"no"	"4.1.0"
## nloptr	NA	NA	NA	"yes"	"4.1.0"
## nlsalt	NA	NA	NA	NA	"4.1.0"
## nlspkg	NA	NA	NA	NA	"4.1.0"
## nlsr	NA	NA	NA	"no"	"4.1.0"
## NMF	NA	NA	NA	"yes"	"4.1.0"
## numDeriv	NA	NA	NA	"no"	"4.1.0"
## OpenMx	NA	NA	NA	"yes"	"4.1.0"
## openssl	NA	NA	NA	"yes"	"4.1.0"
## openxlsx	NA	NA	NA	"yes"	"4.1.0"
## optextras	NA	NA	NA	"no"	"4.1.0"
## optimx	NA	NA	NA	"no"	"4.1.0"
## ore	NA	NA	NA	"yes"	"4.1.0"
## packrat	NA	NA	NA	"no"	"4.1.0"
## pander	NA	NA	NA	"yes"	"4.1.0"
## parallelly	NA	NA	NA	"no"	"4.1.0"
## parfm	NA	NA	NA	"no"	"4.1.0"
## parsedate	NA	NA	NA	"yes"	"4.1.0"
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## pbivnorm	NA	NA	NA	"yes"	"4.1.0"
## pbkrtest	NA	NA	NA	"no"	"4.1.0"
## pbmcapply	NA	NA	NA	"yes"	"4.1.0"
## pbv	NA	NA	NA	"yes"	"4.1.0"
## pcaL1	NA	NA	NA	"yes"	"4.1.0"
## pcaPP	NA	NA	NA	"yes"	"4.1.0"
## pegas	NA	NA	NA	"yes"	"4.1.0"
## permute	NA	NA	NA	"no"	"4.1.0"
## phangorn	NA	NA	NA	"yes"	"4.1.0"
## phylobase	NA	NA	NA	"yes"	"4.1.0"
## phylolm	NA	NA	NA	"yes"	"4.1.0"
## pixmap	NA	NA	NA	"no"	"4.1.0"
## pkgbuild	NA	NA	NA	"no"	"4.1.0"
## pkgmaker	NA	NA	NA	"no"	"4.1.0"
## PKPDmodels	NA	NA	NA	NA	"4.1.0"
## plogr	NA	NA	NA	"no"	"4.1.0"
## plotly	NA	NA	NA	"no"	"4.1.0"
## plotrix	NA	NA	NA	"no"	"4.1.0"
## plyr	NA	NA	NA	"yes"	"4.1.0"
## png	NA	NA	NA	"yes"	"4.1.0"
## polyspline	NA	NA	NA	"yes"	"4.1.0"
## polyclip	NA	NA	NA	"yes"	"4.1.0"
## polycor	NA	NA	NA	"no"	"4.1.0"
## polynom	NA	NA	NA	"no"	"4.1.0"

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## prettyunits	NA	NA	NA	"no"	"4.1.0"
## pROC	NA	NA	NA	"yes"	"4.1.0"
## proclim	NA	NA	NA	"yes"	"4.1.0"
## progress	NA	NA	NA	"no"	"4.1.0"
## projpred	NA	NA	NA	"yes"	"4.1.0"
## promises	NA	NA	NA	"yes"	"4.1.0"
## proxy	NA	NA	NA	"yes"	"4.1.0"
## pryr	NA	NA	NA	"yes"	"4.1.0"
## pso	NA	NA	NA	NA	"4.1.0"
## pspline	NA	NA	NA	"yes"	"4.1.0"
## psych	NA	NA	NA	"no"	"4.1.0"
## psychTools	NA	NA	NA	"no"	"4.1.0"
## purrr	NA	NA	NA	"yes"	"4.1.0"
## qgam	NA	NA	NA	"yes"	"4.1.0"
## qgraph	NA	NA	NA	"yes"	"4.1.0"
## qqplotr	NA	NA	NA	"no"	"4.1.0"
## qra	NA	NA	NA	"no"	"4.1.0"
## quadprog	NA	NA	NA	"yes"	"4.1.0"
## quantreg	NA	NA	NA	"yes"	"4.1.0"
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## R.methodsS3	NA	NA	NA	"no"	"4.1.0"
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## R.rsp	NA	NA	NA	"no"	"4.1.0"
## R.utils	NA	NA	NA	"no"	"4.1.0"
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## RandomFieldsUtils	NA	NA	NA	"yes"	"4.1.0"
## RANN	NA	NA	NA	"yes"	"4.1.0"
## rappdirs	NA	NA	NA	"yes"	"4.1.0"
## raster	NA	NA	NA	"yes"	"4.1.0"
## rbibutils	NA	NA	NA	"yes"	"4.1.0"
## Rcgmin	NA	NA	NA	"no"	"4.1.0"
## rcmdcheck	NA	NA	NA	"no"	"4.1.0"
## RColorBrewer	NA	NA	NA	"no"	"4.1.0"
## RcppArmadillo	NA	NA	NA	"yes"	"4.1.0"
## RcppEigen	NA	NA	NA	"yes"	"4.1.0"
## RcppFaddeeva	NA	NA	NA	"yes"	"4.1.0"
## RcppGSL	NA	NA	NA	"yes"	"4.1.0"
## RcppParallel	NA	NA	NA	"yes"	"4.1.0"
## RcppZiggurat	NA	NA	NA	"yes"	"4.1.0"
## Rdpack	NA	NA	NA	"no"	"4.1.0"
## readr	NA	NA	NA	"yes"	"4.1.0"
## readxl	NA	NA	NA	"yes"	"4.1.0"
## recipes	NA	NA	NA	"no"	"4.1.0"
## registry	NA	NA	NA	"no"	"4.1.0"
## regsem	NA	NA	NA	"yes"	"4.1.0"
## rematch	NA	NA	NA	"no"	"4.1.0"
## remotes	NA	NA	NA	"no"	"4.1.0"
## reportr	NA	NA	NA	"no"	"4.1.0"
## reprex	NA	NA	NA	"no"	"4.1.0"
## reshape	NA	NA	NA	"yes"	"4.1.0"
## reshape2	NA	NA	NA	"yes"	"4.1.0"
## reticulate	NA	NA	NA	"yes"	"4.1.0"
## revdepcheck	NA	NA	NA	"no"	"4.1.0"

## rex	NA	NA	NA	"no"	"4.1.0"
## Rfast	NA	NA	NA	"yes"	"4.1.0"
## rgeos	NA	NA	NA	"yes"	"4.1.0"
## rgho	NA	NA	NA	"no"	"4.1.0"
## rgl	NA	NA	NA	"yes"	"4.1.0"
## rio	NA	NA	NA	"no"	"4.1.0"
## rms	NA	NA	NA	"yes"	"4.1.0"
## rncl	NA	NA	NA	"yes"	"4.1.0"
## RNeXML	NA	NA	NA	"no"	"4.1.0"
## rngtools	NA	NA	NA	"no"	"4.1.0"
## robustbase	NA	NA	NA	"yes"	"4.1.0"
## robustlmm	NA	NA	NA	"yes"	"4.1.0"
## rockchalk	NA	NA	NA	"no"	"4.1.0"
## roptim	NA	NA	NA	"yes"	"4.1.0"
## roxygen2	NA	NA	NA	"yes"	"4.1.0"
## rpf	NA	NA	NA	"yes"	"4.1.0"
## rr2	NA	NA	NA	"no"	"4.1.0"
## rrBLUP	NA	NA	NA	"no"	"4.1.0"
## rsconnect	NA	NA	NA	"no"	"4.1.0"
## Rsolnp	NA	NA	NA	"no"	"4.1.0"
## RSpectra	NA	NA	NA	"yes"	"4.1.0"
## RSQLite	NA	NA	NA	"yes"	"4.1.0"
## rstan	NA	NA	NA	"yes"	"4.1.0"
## rstanarm	NA	NA	NA	"yes"	"4.1.0"
## rstantools	NA	NA	NA	"no"	"4.1.0"
## rstatix	NA	NA	NA	"no"	"4.1.0"
## rstpm2	NA	NA	NA	"yes"	"4.1.0"
## Rtsne	NA	NA	NA	"yes"	"4.1.0"
## RUnit	NA	NA	NA	"no"	"4.1.0"
## rvcheck	NA	NA	NA	"no"	"4.1.0"
## rversions	NA	NA	NA	"no"	"4.1.0"
## rvest	NA	NA	NA	"no"	"4.1.0"
## Rvmmmin	NA	NA	NA	"no"	"4.1.0"
## Ryacas	NA	NA	NA	"yes"	"4.1.0"
## s2	NA	NA	NA	"yes"	"4.1.0"
## sandwich	NA	NA	NA	"no"	"4.1.0"
## sass	NA	NA	NA	"yes"	"4.1.0"
## scales	NA	NA	NA	"no"	"4.1.0"
## scatterpie	NA	NA	NA	"no"	"4.1.0"
## scatterplot3d	NA	NA	NA	"no"	"4.1.0"
## segmented	NA	NA	NA	"no"	"4.1.0"
## selectr	NA	NA	NA	"no"	"4.1.0"
## sem	NA	NA	NA	"yes"	"4.1.0"
## semEff	NA	NA	NA	"no"	"4.1.0"
## semPlot	NA	NA	NA	"no"	"4.1.0"
## seqinr	NA	NA	NA	"yes"	"4.1.0"
## sessioninfo	NA	NA	NA	"no"	"4.1.0"
## setRNG	NA	NA	NA	"no"	"4.1.0"
## sf	NA	NA	NA	"yes"	"4.1.0"
## shape	NA	NA	NA	"no"	"4.1.0"
## shiny	NA	NA	NA	"no"	"4.1.0"
## shinyBS	NA	NA	NA	"no"	"4.1.0"
## shinycssloaders	NA	NA	NA	"no"	"4.1.0"
## shinyjs	NA	NA	NA	"no"	"4.1.0"



## shinystan	NA	NA	NA	"no"	"4.1.0"
## shinythemes	NA	NA	NA	"no"	"4.1.0"
## sn	NA	NA	NA	"no"	"4.1.0"
## sna	NA	NA	NA	"yes"	"4.1.0"
## snow	NA	NA	NA	"no"	"4.1.0"
## snowfall	NA	NA	NA	"no"	"4.1.0"
## soma	NA	NA	NA	"no"	"4.1.0"
## sourcetools	NA	NA	NA	"yes"	"4.1.0"
## sp	NA	NA	NA	"yes"	"4.1.0"
## spacetime	NA	NA	NA	"no"	"4.1.0"
## spam	NA	NA	NA	"yes"	"4.1.0"
## SparseM	NA	NA	NA	"yes"	"4.1.0"
## spData	NA	NA	NA	"no"	"4.1.0"
## spdep	NA	NA	NA	"yes"	"4.1.0"
## splancs	NA	NA	NA	"yes"	"4.1.0"
## SQUAREM	NA	NA	NA	"no"	"4.1.0"
## stabledist	NA	NA	NA	"no"	"4.1.0"
## StanHeaders	NA	NA	NA	"yes"	"4.1.0"
## statespacer	NA	NA	NA	"yes"	"4.1.0"
## statmod	NA	NA	NA	"yes"	"4.1.0"
## statnet.common	NA	NA	NA	"yes"	"4.1.0"
## subplex	NA	NA	NA	"yes"	"4.1.0"
## SurvCorr	NA	NA	NA	"no"	"4.1.0"
## survey	NA	NA	NA	"no"	"4.1.0"
## svglite	NA	NA	NA	"yes"	"4.1.0"
## sys	NA	NA	NA	"yes"	"4.1.0"
## tcltk2	NA	NA	NA	"no"	"4.1.0"
## tensorflow	NA	NA	NA	"no"	"4.1.0"
## testDriveR	NA	NA	NA	"no"	"4.1.0"
## tfruns	NA	NA	NA	"no"	"4.1.0"
## TH.data	NA	NA	NA	"no"	"4.1.0"
## threejs	NA	NA	NA	"no"	"4.1.0"
## tidyr	NA	NA	NA	"yes"	"4.1.0"
## tidyselect	NA	NA	NA	"yes"	"4.1.0"
## tidyverse	NA	NA	NA	"no"	"4.1.0"
## timeDate	NA	NA	NA	"no"	"4.1.0"
## timereg	NA	NA	NA	"yes"	"4.1.0"
## timeSeries	NA	NA	NA	"no"	"4.1.0"
## tkrplot	NA	NA	NA	"yes"	"4.1.0"
## TMB	NA	NA	NA	"yes"	"4.1.0"
## tmvnsim	NA	NA	NA	"yes"	"4.1.0"
## tmvtnorm	NA	NA	NA	"yes"	"4.1.0"
## transport	NA	NA	NA	"yes"	"4.1.0"
## triangle	NA	NA	NA	"no"	"4.1.0"
## truncnorm	NA	NA	NA	"yes"	"4.1.0"
## tweenr	NA	NA	NA	"yes"	"4.1.0"
## ucminf	NA	NA	NA	"yes"	"4.1.0"
## umap	NA	NA	NA	"yes"	"4.1.0"
## units	NA	NA	NA	"yes"	"4.1.0"
## unmarked	NA	NA	NA	"yes"	"4.1.0"
## usethis	NA	NA	NA	"no"	"4.1.0"
## VCA	NA	NA	NA	"yes"	"4.1.0"
## vegan	NA	NA	NA	"yes"	"4.1.0"
## VGAM	NA	NA	NA	"yes"	"4.1.0"

## vipor	NA	NA	NA	"no"	"4.1.0"
## viridis	NA	NA	NA	"no"	"4.1.0"
## viridisLite	NA	NA	NA	"no"	"4.1.0"
## visNetwork	NA	NA	NA	"no"	"4.1.0"
## webshot	NA	NA	NA	"no"	"4.1.0"
## whisker	NA	NA	NA	"no"	"4.1.0"
## whoami	NA	NA	NA	"no"	"4.1.0"
## wk	NA	NA	NA	"yes"	"4.1.0"
## XML	NA	NA	NA	"yes"	"4.1.0"
## xopen	NA	NA	NA	"no"	"4.1.0"
## xtable	NA	NA	NA	"no"	"4.1.0"
## xts	NA	NA	NA	"yes"	"4.1.0"
## YieldCurve	NA	NA	NA	NA	"4.1.0"
## zeallot	NA	NA	NA	"no"	"4.1.0"
## zipfR	NA	NA	NA	"no"	"4.1.0"
## zoo	NA	NA	NA	"yes"	"4.1.0"
## base64enc	NA	NA	NA	"yes"	"4.0.0"
## brio	NA	NA	NA	"yes"	"4.0.5"
## cairoDevice	NA	NA	NA	"yes"	"4.0.2"
## callr	NA	NA	NA	"no"	"4.0.5"
## cli	NA	NA	NA	"no"	"4.0.5"
## cpp11	NA	NA	NA	"no"	"4.0.4"
## crayon	NA	NA	NA	"no"	"4.0.3"
## curl	NA	NA	NA	"yes"	"4.0.5"
## data.table	NA	NA	NA	"yes"	"4.0.4"
## desc	NA	NA	NA	"no"	"4.0.4"
## diffobj	NA	NA	NA	"yes"	"4.0.4"
## digest	NA	NA	NA	"yes"	"4.0.3"
## ellipsis	NA	NA	NA	"yes"	"4.0.5"
## evaluate	NA	NA	NA	"no"	"4.0.0"
## fansi	NA	NA	NA	"yes"	"4.1.0"
## flextable	NA	NA	NA	"no"	"4.0.5"
## fontBitstreamVera	NA	NA	NA	"no"	"4.0.0"
## fontLiberation	NA	NA	NA	"no"	"4.0.0"
## fontquiver	NA	NA	NA	"no"	"4.0.0"
## freetypeharfbuzz	NA	NA	NA	"yes"	"4.0.0"
## gdtools	NA	NA	NA	"yes"	"4.0.3"
## glue	NA	NA	NA	"yes"	"4.0.2"
## gmp	NA	NA	NA	"yes"	"4.0.3"
## highr	NA	NA	NA	"no"	"4.0.5"
## htmltools	NA	NA	NA	"yes"	"4.0.3"
## htmlwidgets	NA	NA	NA	"no"	"4.0.3"
## jsonlite	NA	NA	NA	"yes"	"4.0.3"
## knitr	NA	NA	NA	"no"	"4.0.5"
## lifecycle	NA	NA	NA	"no"	"4.0.4"
## magrittr	NA	NA	NA	"yes"	"4.0.3"
## markdown	NA	NA	NA	"yes"	"4.0.0"
## mime	NA	NA	NA	"yes"	"4.0.3"
## officer	NA	NA	NA	"no"	"4.0.5"
## pillar	NA	NA	NA	"no"	"4.0.5"
## pkgconfig	NA	NA	NA	"no"	"4.0.0"
## pkgload	NA	NA	NA	"yes"	"4.0.5"
## praise	NA	NA	NA	"no"	"4.0.0"
## processx	NA	NA	NA	"yes"	"4.0.5"

## ps	NA	NA	NA	"yes"	"4.0.4"
## R6	NA	NA	NA	"no"	"4.0.3"
## Rcpp	NA	NA	NA	"yes"	"4.0.5"
## rematch2	NA	NA	NA	"no"	"4.0.0"
## rJava	NA	NA	NA	"yes"	"4.0.5"
## rjson	NA	NA	NA	"yes"	"4.0.0"
## rJython	NA	NA	NA	NA	"4.0.0"
## rlang	NA	NA	NA	"yes"	"4.0.5"
## rmarkdown	NA	NA	NA	"no"	"4.0.5"
## Rmpfr	NA	NA	NA	"yes"	"4.0.5"
## rprojroot	NA	NA	NA	"no"	"4.0.3"
## rstudioapi	NA	NA	NA	"no"	"4.0.3"
## rSymPy	NA	NA	NA	"no"	"4.0.0"
## stringi	NA	NA	NA	"yes"	"4.0.5"
## stringr	NA	NA	NA	"no"	"4.0.0"
## systemfonts	NA	NA	NA	"yes"	"4.0.5"
## testthat	NA	NA	NA	"yes"	"4.0.4"
## tibble	NA	NA	NA	"yes"	"4.0.5"
## tinytex	NA	NA	NA	"no"	"4.1.0"
## utf8	NA	NA	NA	"yes"	"4.0.4"
## uuid	NA	NA	NA	"yes"	"4.0.0"
## V8	NA	NA	NA	"yes"	"4.0.5"
## vctrs	NA	NA	NA	"yes"	"4.0.5"
## waldo	NA	NA	NA	"no"	"4.0.4"
## withr	NA	NA	NA	"no"	"4.0.5"
## xfun	NA	NA	NA	"yes"	"4.0.5"
## xml2	NA	NA	NA	"yes"	"4.0.0"
## yaml	NA	NA	NA	"yes"	"4.0.0"
## zip	NA	NA	NA	"yes"	"4.1.0"
## base	NA	NA	NA	NA	"4.1.0"
## boot	NA	NA	NA	"no"	"4.0.5"
## class	NA	NA	NA	"yes"	"4.0.5"
## cluster	NA	NA	NA	"yes"	"4.0.5"
## codetools	NA	NA	NA	"no"	"4.0.3"
## compiler	NA	NA	NA	NA	"4.1.0"
## datasets	NA	NA	NA	NA	"4.1.0"
## foreign	NA	NA	NA	"yes"	"4.0.3"
## graphics	NA	NA	NA	"yes"	"4.1.0"
## grDevices	NA	NA	NA	"yes"	"4.1.0"
## grid	NA	NA	NA	"yes"	"4.1.0"
## KernSmooth	NA	NA	NA	"yes"	"4.0.5"
## lattice	NA	NA	NA	"yes"	"4.1.0"
## MASS	NA	NA	NA	"yes"	"4.0.5"
## Matrix	NA	NA	NA	"yes"	"4.1.0"
## methods	NA	NA	NA	"yes"	"4.1.0"
## mgcv	NA	NA	NA	"yes"	"4.1.0"
## nlme	NA	NA	NA	"yes"	"4.0.3"
## nnet	NA	NA	NA	"yes"	"4.0.5"
## parallel	NA	NA	NA	"yes"	"4.1.0"
## rpart	NA	NA	NA	"yes"	"4.0.0"
## spatial	NA	NA	NA	"yes"	"4.0.5"
## splines	NA	NA	NA	"yes"	"4.1.0"
## stats	NA	NA	NA	"yes"	"4.1.0"
## stats4	NA	NA	NA	NA	"4.1.0"

```

## survival          NA          NA      NA      "yes"      "4.0.5"
## tcltk             NA          NA      NA      "yes"      "4.1.0"
## tools            NA          NA      NA      "yes"      "4.1.0"
## utils            NA          NA      NA      "yes"      "4.1.0"
##
## $machine
## $machine$double.eps
## [1] 2.220446e-16
##
## $machine$double.neg.eps
## [1] 1.110223e-16
##
## $machine$double.xmin
## [1] 2.225074e-308
##
## $machine$double.xmax
## [1] 1.797693e+308
##
## $machine$double.base
## [1] 2
##
## $machine$double.digits
## [1] 53
##
## $machine$double.rounding
## [1] 5
##
## $machine$double.guard
## [1] 0
##
## $machine$double.ulp.digits
## [1] -52
##
## $machine$double.neg.ulp.digits
## [1] -53
##
## $machine$double.exponent
## [1] 11
##
## $machine$double.min.exp
## [1] -1022
##
## $machine$double.max.exp
## [1] 1024
##
## $machine$integer.max
## [1] 2147483647
##
## $machine$sizeof.long
## [1] 8
##
## $machine$sizeof.longlong
## [1] 8
##

```

```

## $machine$sizeof.longdouble
## [1] 16
##
## $machine$sizeof.pointer
## [1] 8
##
## $machine$longdouble.eps
## [1] 1.084202e-19
##
## $machine$longdouble.neg.eps
## [1] 5.421011e-20
##
## $machine$longdouble.digits
## [1] 64
##
## $machine$longdouble.rounding
## [1] 5
##
## $machine$longdouble.guard
## [1] 0
##
## $machine$longdouble.ulp.digits
## [1] -63
##
## $machine$longdouble.neg.ulp.digits
## [1] -64
##
## $machine$longdouble.exponent
## [1] 15
##
## $machine$longdouble.min.exp
## [1] -16382
##
## $machine$longdouble.max.exp
## [1] 16384
##
##
## $package_version
## [1] "1.0.7"
##
## $id
## [1] "2021-06-14-52787691"
##
## $date
## [1] "2021-06-14"

```

## calceps.R

This is a port of Mike Malcolm's ENVIRON to R. ??ref. It computes the machine precision, radix and number of radix digits.

?? get file into chunk

calceps.R

- calceps.R example

```
### Sys.info()
```

```
```r
```

```
Sys.info()
```

```
##                               sysname
##                               "Linux"
##                               release
##                               "5.4.0-74-generic"
##                               version
## "#83-Ubuntu SMP Sat May 8 02:35:39 UTC 2021"
##                               nodename
##                               "M21"
##                               machine
##                               "x86_64"
##                               login
##                               "unknown"
##                               user
##                               "john"
##                               effective_user
##                               "john"
```

Issues relateing to RNG

Issues relating to compilation of R

- LAPACK
- BLAS
- others?

**Tools for accessing and clearing environments and dataframes**

?? should this be here – probably to list things in the workspace

```
sys.frame()
sys.frames()
sys.status()
sys.on.exit()
sys.parents()
sys.calls()
```

??JN exp(sin(cos())) benchmark