

Package ‘lotri’

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Title A Simple Way to Specify Symmetric, Block Diagonal Matrices

Version 0.1.1

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Description Provides a simple mechanism to specify a symmetric block diagonal matrices (often used for covariance matrices). This is based on the domain specific language implemented in 'nlmixr' but expanded to create matrices in R generally instead of specifying parts of matrices to estimate.

Depends R (>= 3.4.0)

License GPL (>= 2)

Encoding UTF-8

LazyData true

Imports Matrix, methods

Suggests testthat, covr, knitr, rmarkdown

RoxygenNote 6.1.1

VignetteBuilder knitr

BugReports <https://github.com/nlmixrdevelopment/lotri/issues>

URL <https://github.com/nlmixrdevelopment/lotri>

NeedsCompilation no

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Repository CRAN

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lotri

Easily Specify block-diagonal matrices with lower triangular info

Description

Easily Specify block-diagonal matrices with lower triangular info

Usage

```
lotri(x, ...)
```

Arguments

x	list, matrix or expression, see details
...	Other arguments treated as a list that will be concatenated then reapplied to this function.

Details

This can take an R matrix, a list including matrices or expressions, or expressions

Expressions can take the form

name ~ estimate

Or the lower triangular matrix when "adding" the names

name1 + name2 ~ c(est1, est2, est3)

The matrices are concatenated into a block diagonal matrix, like [bdiag](#), but allows expressions to specify matrices easier.

Value

named symmetric matrix useful in [RxODE](#) simulations (and perhaps elsewhere)

Author(s)

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See Also

[RxODE](#)

Examples

```
## A few ways to specify the same matrix
lotri({et2 + et3 + et4 ~ c(40,
                          0.1, 20,
                          0.1, 0.1, 30)})

## You do not need to enclose in {}
lotri(et2 + et3 + et4 ~ c(40,
                          0.1, 20,
                          0.1, 0.1, 30),
      et5 ~ 6)
## But if you do enclose in {}, you can use multi-line matrix specifications:

lotri({et2 + et3 + et4 ~ c(40,
                          0.1, 20,
                          0.1, 0.1, 30);
      et5 ~ 6;
})

## You can also add lists or actual R matrices as in this example:
lotri(list(et2 + et3 + et4 ~ c(40,
                              0.1, 20,
                              0.1, 0.1, 30),
          matrix(1,dimnames=list("et5","et5"))))

## Overall this is a flexible way to specify symmetric block diagonal matrices.
```

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