

Package ‘diagonals’

May 8, 2021

Title Block Diagonal Extraction or Replacement

Version 6.0.0

Description Several tools for handling block-matrix diagonals and similar constructs are implemented. Block-diagonal matrices can be extracted or removed using two small functions implemented here. In addition, non-square matrices are supported. Block diagonal matrices occur when two dimensions of a data set are combined along one edge of a matrix. For example, trade-flow data in the 'decompr' and 'gvc' packages have each country-industry combination occur along both edges of the matrix.

Depends R (>= 2.10)

License GPL-3

URL <https://qua.st/diagonals>, <https://github.com/bquast/diagonals>

BugReports <https://github.com/bquast/diagonals/issues>

Suggests testthat, knitr, rmarkdown

VignetteBuilder knitr

RoxygenNote 7.1.1

Encoding UTF-8

NeedsCompilation no

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Repository CRAN

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R topics documented:

diagonals	2
fatdiag	2
split_vector	3

Index	4
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 diagonals

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Description

Several tools for handling block-matrix diagonals and similar constructs are implemented. Block-diagonal matrices can be extracted or removed using two small functions implemented here. In addition, non-square matrices are supported. Block diagonal matrices occur when two dimensions of a data set are combined along one edge of a matrix. For example, trade-flow data in the `decompr` and `gvc` packages have each country-industry combination occur along both edges of the matrix.

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See Also

<https://qua.st/diagonals>

 fatdiag

Fat Matrix Diagonals

Description

Fat Matrix Diagonals

fatdiag set

Usage

```
fatdiag(x = 1, steps = NULL, size = NULL, nrow = NULL, ncol = NULL)
```

```
fatdiag(x, steps = NULL, size = NULL, on_diagonal = TRUE) <- value
```

Arguments

<code>x</code>	a matrix where the dimensions are integer multiples of <code>size</code> or integer divisors of <code>steps</code>
<code>steps</code>	the required number of steps (block matrices) across the diagonal
<code>size</code>	the width or height of the matrix being dropped over the diagonal of matrix <code>x</code>
<code>nrow</code>	the number of rows
<code>ncol</code>	the number of columns
<code>on_diagonal</code>	should the operation be applied to the elements on the fat diagonal.
<code>value</code>	replacement value

Details

Either steps or size is expected to be provided.

Functions

- fatdiag<-: the set version of fatdiag

Examples

```
fatdiag(12, steps=3)

( m <- matrix(111, nrow=6, ncol=9) )
fatdiag(m, steps=3) <- 5

fatdiag(m, steps=3)

fatdiag(12, size=4)

fatdiag(12, size=c(3,4) )
```

split_vector

Split Vector

Description

Split Vector

Usage

```
split_vector(x, steps = NULL, size = NULL, replacement = 0)
```

Arguments

x	a numeric or character vector
steps	the number of steps
size	the size of the step
replacement	value to be inserted on the diagonal, by default this is zero (0).

Details

Either steps or size is expected to be provided.

Index

`diagonals`, 2

`fatdiag`, 2

`fatdiag<- (fatdiag)`, 2

`split_vector`, 3