Package ‘diagonals’

August 29, 2016

Title  Block Diagonal Extraction or Replacement
Version  0.4.0
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
LazyData  true


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

Suggests  testthat, knitr
VignetteBuilder  knitr

NeedsCompilation  no
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Description

Fat Matrix Diagonals

fatdiag set

Usage

fatdiag(x = 1L, steps = NULLL, size = NULLL, nrow = NULLL, ncol = NULLL)
fatdiag(xL, steps = NULLL, size = NULLL, on_diagonal = TRUE) <- value

Arguments

x  a matrix where the dimensions are integer multiples of size or integer divisors of steps
steps the required number of steps (block matrices) across the diagonal
size  the width or height of the matrix being dropped over the diagonal of matrix x
nrow the number of rows
ncol the number of columns
on_diagonal should the operation be apply to the elements on the fat diagonal.
value 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(111L, nrow=6, ncol=9) )
fatdiag(m, steps=3) <- 5

fatdiag(m, steps=3)
fatdiag(12, size=4)
fatdiag(12, size=c(3,4) )

matricise

Matricise

Description

Matricise

Usage

matricise(x, row_dim = c(NULL, 3, 4), col_dim = c(NULL, 3, 4))

Arguments

x a higher-order array (length(dim(x)) >= 3)

row_dim the input array dimension which should be added to the row dimension of the output matrix, the value has to be 3 or 4.

col_dim the input array dimension which should be added to the column dimension of the output matrix, the value has to be 3 or 4.

Value

a matrix (length(dim(x)) == 2 )
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.
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