Package: findblobs (via r-universe)

September 15, 2024

Title R Package to Find Connected Cells (Blobs) in a Matrix of Logical

Version 0.0.0.9000

Description This package provides functions to find blobs of connected cells in a matrix of logical. This is also known as Blob Colouring.

License MIT

BugReports https://github.com/hsonne/findblobs/issues

Encoding UTF-8

LazyData true

RoxygenNote 7.1.2

Imports kwb.utils

Remotes github::kwb-r/kwb.utils

Repository https://hsonne.r-universe.dev

RemoteUrl https://github.com/hsonne/findblobs

RemoteRef HEAD

RemoteSha 33a6d37166226a8f090cbabb1b5baf60173d01ca

Contents

get_column_blobs *Find Connected Cells along Matrix Columns*

Description

Find Connected Cells along Matrix Columns

Usage

```
get_column_blobs(m, offset = 0L)
```

Arguments

m	a matrix of logical
offset	integer to be added to the numbers indicating connected cells

Value

matrix of integer having the same dimension as `m`. Cells being `FALSE` in `m` are `0` in the output. Cells being `TRUE` in `m` are a positive integer number in the output. Connected cells within same columns share the same number.

Examples

```
column_blobs <- findblobs:::get_column_blobs(
  matrix(ncol = 3, byrow = TRUE, c(
    FALSE, TRUE, FALSE,
    TRUE,  TRUE, FALSE,
    FALSE, FALSE, TRUE,
    TRUE,  TRUE,  TRUE,
    TRUE,  FALSE, TRUE
  ))
)

findblobs::plot_integer_matrix(column_blobs)
```

order_by_first *Order List of Vectors by First Vector Elements*

Description

Order List of Vectors by First Vector Elements

Usage

```
order_by_first(x)
```

Arguments

x	list of vectors

Examples

```
findblobs:::order_by_first(list(
  c(3, 4),
  c(1, 5, 6),
  c(2, 1)
))
```

---

place_random_blobs *Create Random Blobs in a Matrix*

Description

Create Random Blobs in a Matrix

Usage

```
place_random_blobs(
  m = matrix(0L, nrow = 10, ncol = 15),
  n_blobs = 5,
  min_fields = 3,
  max_fields = min_fields,
  do_plot = TRUE
)
```

Arguments

m	matrix of integer in which to place blobs. Default: 10 x 15-Matrix
n_blobs	number of blobs to create. Default: 5
min_fields	minimum number of fields a blob should consist of
max_fields	maximum number of fields a blob should consist of. Defaults to min_fields
do_plot	if TRUE (the default), the result matrix is plotted

Value

matrix in which fields belonging to the same blob have the same integer number and zeros indicate empty fields

Examples

```
set.seed(42)
place_random_blobs(n_blobs = 5, min_fields = 5, max_fields = 10)
```

plot_integer_matrix *Plot Matrix of Integer as Coloured Squares*

Description

Plot Matrix of Integer as Coloured Squares

Usage

```
plot_integer_matrix(x, colours = NULL)
```

Arguments

x	matrix of integer

Examples

```
plot_integer_matrix(matrix(nrow = 5, byrow = TRUE, c(
  2, 2, 2, 2, 2,
  2, 0, 1, 0, 2,
  2, 1, 1, 1, 2,
  2, 0, 1, 0, 2,
  2, 2, 2, 2, 2
)))
```

random_matrix *Create Matrix with Randomly "Filled" Fields*

Description

Create Matrix with Randomly "Filled" Fields

Usage

```
random_matrix(matrix_dim = c(10, 10))
```

Arguments

matrix_dim	numeric vector of length two giving the number of rows and columns, respectively of the matrix

Index