Package: ggtilematrix (via r-universe)

September 11, 2024

Title Create customisable ggplot2 matrix

Version 0.0.0.9000

Description More about what it does (maybe more than one line) Use
four spaces when indenting paragraphs within the Description.

License GPL (>= 3)

Encoding UTF-8

LazyData true

Suggests testthat (>= 3.0.0)

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Depends R (>= 2.10)

Roxygen list(markdown = TRUE)

RoxygenNote 7.2.3

Imports dplyr, ggplot2, tibble, tidyr, tidyselect

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

RemoteUrl https://github.com/cynthiahqy/ggtilematrix

RemoteRef HEAD

RemoteSha 8b55fb2251741631c5220577d2a7da6befadd011

Contents

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gg_tilematrix.matrix   *Plot a matrix as a ggplot2 object*

Description

Plot a matrix as a ggplot2 object

Usage

```
gg_tilematrix.matrix(
  .matrix,
  .geom = list(geom_tile(color = "pink", fill = "blue"), geom_text()),
  .scale_coord = list(scale_y_discrete(limits = base::rev), scale_x_discrete(position =
    "top"), coord_fixed()),
  .theme = list(theme_bw()),
  .layers = list(labs(x = NULL, y = NULL))
)
```

Arguments

.matrix   A matrix to plot

.layers

Examples

```
library(ggplot2)
matrices$unnamed |>
  gg_tilematrix.matrix()
```

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matrix_to_triples   *Pivots a matrix into (bi-graph) triples*

Description

Converts a named (adjacency) matrix into (graph) triples, dropping any NA cells by default.

Usage

```
matrix_to_triples(
  matrix,
  x_names_to = "x_name",
  y_names_to = "y_name",
  values_to = "value",
  drop_na = TRUE
)
```

```
triples_from_matrix(
  matrix,
  x_names_to = "x_name",
  y_names_to = "y_name",
  values_to = "value",
  drop_na = TRUE
)
```

Arguments

matrix	A matrix to pivot
x_names_to	A string specifying the new column for the names of the first/x-dimension of matrix
y_names_to	A string specifying the new column for the names of the second/y-dimension matrix
values_to	A character vector specifying the new column to create from the cell values of matrix
drop_na	Boolean option to drop x-y pairs with missing values.

Details

Uses [pivot_longer](#) and reverses [triples_to_matrix()](#). Setting drop_na=FALSE retain the complete set of graph edges. If matrix is unnamed, default names are generated by [`base::as.data.frame()`](#)

Examples

```
## named matrices
blx_mtx <- triples$blx_tbl |>
  triples_to_matrix(from, to, weighted)
return_triples <- blx_mtx |>
  triples_from_matrix("from", "to", "weighted")

identical(triples$blx_tbl, return_triples)

## Setting `drop_na=FALSE` retains the `x`-`y` pairs with missing values,
return_with_na <- blx_mtx |>
  triples_from_matrix("from", "to", "weighted", drop_na = FALSE)

## which is equivalent to using `tidyr::complete()` on the original triples
complete_triples <- triples$blx_tbl |>
  tidyr::complete(from, to)

identical(return_with_na, complete_triples)

## names are generated for unnamed matrices
matrices$unnamed |>
  matrix_to_triples(drop_na = FALSE)
```

| triples_to_matrix | *Pivot (bi-graph) triples into (bi-adjacency) matrix* |

Description

Converts a data frame of triples (x_names, y_names, values) into a matrix with x_names and y_names respectively for row and column names and cell values from values.

Usage

```
triples_to_matrix(
  triples,
  x_names_from = x_name,
  y_names_from = y_name,
  values_from = value,
  values_fill = NA
)

matrix_from_tripes(
  triples,
  x_names_from = x_name,
  y_names_from = y_name,
  values_from = value,
  values_fill = NA
)
```

Arguments

triples	A data frame to pivot. Unused columns are dropped.
x_names_from	column to get matrix row row names from.
y_names_from	column to get matrix column names from.
values_from	column to get cell values from.
values_fill	Optionally, a (scalar) value that specifies what each value should be filled in with when missing.
	This can be a named list if you want to apply different fill values to different value columns.

Details

The triples define graph edges between x_names and y_names with attribute value. x_names and y_names are treated as disjoint nodes sets of the bi-partite graph, and the resultant matrix corresponds to the bi-adjacency matrix.

Uses pivot_wider and makes explicit all possible pairs of x_names and y_names.

Examples

```
triples$blx_tbl

triples$blx_tbl |>
  triples_to_matrix(from, to, weighted)
```

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