

Package ‘layer’

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Title Tilt your Maps and Turn Them into 'ggplot' Plots

Version 0.0.4

Description Simplifies the whole process of creating stacked tilted maps, that are often used in scientific publications to show different environmental layers for a geographical region. Tilting maps and layering them allows to easily draw visual correlations between these environmental layers.

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URL <https://github.com/marcosci/layer>,
<https://marcosci.github.io/layer/>

BugReports <https://github.com/marcosci/layer/issues>

Depends R (>= 2.10)

Imports dplyr, furrr, ggnewscale, ggplot2, magrittr, raster, rlang,
scico, sf, stars, tidyr

Encoding UTF-8

LazyData true

RoxygenNote 7.3.3

NeedsCompilation no

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landscape_1	<i>Landscape 1</i>
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Description

Random curd neutral landscape model generated using the NLMR package.

Usage

landscape_1

Format

A [raster](#) object.

Source

Data generated using the [NLMR](#) package. See Sciaini et al. (2018) for details: [doi:10.1111/2041-210X.13076](#).

landscape_2	<i>Landscape 2</i>
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Description

Fractional Brownian motion neutral landscape model generated using the NLMR package.

Usage

landscape_2

Format

A [raster](#) object.

Source

Data generated using the [NLMR](#) package. See Sciaini et al. (2018) for details: [doi:10.1111/2041-210X.13076](#).

landscape_3*Landscape 3*

Description

Distance gradient neutral landscape model generated using the NLMR package.

Usage

landscape_3

Format

A *raster* object.

Source

Data generated using the *NLMR* package. See Sciaini et al. (2018) for details: [doi:10.1111/2041-210X.13076](https://doi.org/10.1111/2041-210X.13076).

landscape_points*Landscape Points*

Description

Random curd neutral landscape model generated using the NLMR package.

Usage

landscape_points

Format

A *raster* object.

Source

Data generated using the *NLMR* package. See Sciaini et al. (2018) for details: [doi:10.1111/2041-210X.13076](https://doi.org/10.1111/2041-210X.13076).

plot_tiltedmaps	<i>Tilt raster and sf data</i>
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Description

Takes tilted maps and plots them with ggplot.

Usage

```
plot_tiltedmaps(
  map_list,
  layer = NA,
  palette = "viridis",
  color = "grey50",
  direction = 1,
  begin = 0,
  end = 1,
  alpha = 1
)
```

Arguments

map_list	sf or terra/stars/raster object.
layer	vector or list of names of each column in tilted sf object that should be used for coloring
palette	vector of palettes provided by the viridis and scico packages for rasters
color	a single color applied multiple times or a vector of color strings for points or linestrings
direction	vector of directions for viridis and scico color palettes
begin	vector of the of the start of interval the palette to sample colours from for viridis and scico color palettes
end	vector of the of the end of interval the palette to sample colours from for viridis and scico color palettes
alpha	vector of opacity for viridis and scico color palettes

Value

A ggplot object with stacked maps.

Examples

```
# tilt data
tilt_landscape_1 <- tilt_map(landscape_1)
tilt_landscape_2 <- tilt_map(landscape_2, x_shift = 50, y_shift = 50)

# plot
```

```
map_list <- list(tilt_landscape_1, tilt_landscape_2)
plot_tiltedmaps(map_list, palette = "turbo")
```

tilt_map

Tilt raster and sf data

Description

Tilt and shift maps in any direction.#'

Usage

```
tilt_map(
  data,
  x_stretch = 2,
  y_stretch = 1.2,
  x_tilt = 0,
  y_tilt = 1,
  x_shift = 0,
  y_shift = 0,
  angle_rotate = pi/20,
  boundary = NULL,
  parallel = FALSE
)
```

Arguments

data	sf or terra/stars/raster object.
x_stretch	Stretch in x dimension. A numeric vector of length 1.
y_stretch	Stretch in y dimension. A numeric vector of length 1.
x_tilt	Tilt in x dimension. A numeric vector of length 1.
y_tilt	Tilt in y dimension. A numeric vector of length 1.
x_shift	Shift in x dimension. A numeric vector of length 1.
y_shift	Shift in y dimension. A numeric vector of length 1.
angle_rotate	Rotation angle.. A numeric vector of length 1. Default is pi/20.
boundary	Another layer that is used to create a boundary that is drawn around the data
parallel	logical to run in parallel. FALSE (default)

Details

Code adopted from <https://www.mzes.uni-mannheim.de/socialsciencedatalab/article/geospatial-data/>.

Value

An sf object with tilted and shifted data.

Examples

```
tilt_map(landscape_1)
```

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