

Package ‘simplevis’

January 29, 2023

Type Package

Title Wrappers to Simplify 'leaflet' Visualisation

Version 7.0.0

Description Wrapper functions around the amazing 'leaflet' package that aims to simplify 'leaflet' visualisation. See the 'ggblanket' package for 'ggplot2' wrappers.

License MIT + file LICENSE

URL <https://StatisticsNZ.github.io/simplevis/>,
<https://github.com/StatisticsNZ/simplevis/>

BugReports <https://github.com/StatisticsNZ/simplevis/issues/>

Encoding UTF-8

LazyData true

Depends R (>= 3.5.0)

Imports dplyr, htmlwidgets, leaflet, leafem, leafpop, magrittr, rlang, scales, sf, shiny, snakecase, stars, stringr, tidyr, tidyselect, viridis, ggplot2

Suggests glue, gt, knitr, pals, palmerpenguins, patchwork, rgdal, rgeos, rmarkdown, s2, tibble, tidytext

VignetteBuilder knitr

RoxygenNote 7.2.3

NeedsCompilation no

Author David Hodge [aut, cre] (<<https://orcid.org/0000-0002-3868-7501>>),
Kate Lee [ctb] (<<https://orcid.org/0000-0002-0886-3746>>),
Xavier Miles [ctb] (<<https://orcid.org/0000-0002-1727-5110>>),
Statistics New Zealand [cph]

Maintainer David Hodge <davidhodge931@gmail.com>

Repository CRAN

Date/Publication 2023-01-29 20:00:02 UTC

R topics documented:

example_borders	2
example_point	2
example_polygon	3
example_stars	3
leaf_basemap	3
leaf_clear	4
leaf_sf	5
leaf_sf_col	6
leaf_stars	9
leaf_stars_col	10

Index	12
--------------	-----------

example_borders	<i>Example sf object of the New Zealand coastline.</i>
-----------------	--

Description

Example sf object of the New Zealand coastline used to demonstrate adding borders to maps.

Usage

```
example_borders
```

Format

An sf object.

example_point	<i>Example sf point object.</i>
---------------	---------------------------------

Description

Example sf point object.

Usage

```
example_point
```

Format

An sf object.

example_polygon	<i>Example sf polygon object.</i>
-----------------	-----------------------------------

Description

Example sf polygon object.

Usage

```
example_polygon
```

Format

An sf object.

example_stars	<i>Example stars object.</i>
---------------	------------------------------

Description

Example stars object.

Usage

```
example_stars
```

Format

A stars object.

leaf_basemap	<i>Basemap stack in leaflet.</i>
--------------	----------------------------------

Description

Make a stack of leaflet baselayers for use in shiny apps.

Usage

```
leaf_basemap(bounds = NULL, basemap = "light")
```

Arguments

bounds	A bbox object or numeric vector of length four, with xmin, ymin, xmax and ymax values in WGS84 (epsg 4326).
basemap	The first layer to start in the basemap stack. Either "light", "dark", "street", "satellite", or "ocean". Defaults to "light".

Value

A leaflet object.

Examples

```
leaf_basemap(basemap = "dark")  
leaf_basemap(bounds = c(166.70047, -34.45676, 178.52966, -47.06345))
```

leaf_clear	<i>In shiny, clear all features, images and legends.</i>
------------	--

Description

In shiny, clear all features, images and legends.

Usage

```
leaf_clear(map_id = "leaf")
```

Arguments

map_id	The map id for a leaflet map. Defaults to "leaf".
--------	---

Value

A map object.

leaf_sf	<i>Simple feature leaflet map.</i>
---------	------------------------------------

Description

Map of simple features in leaflet that is not coloured.

Usage

```
leaf_sf(
  data,
  popup = TRUE,
  popup_vars_vctr = NULL,
  popup_numeric_format = function(x) prettyNum(x, big.mark = "", scientific = FALSE),
  popup_vars_rename = snakecase::to_sentence_case,
  pal = pal_viridis_mix(1),
  size_point = 2,
  size_line = 2,
  alpha_point = NULL,
  alpha_line = NULL,
  alpha_fill = NULL,
  basemap = "light",
  layer_id_var = NULL,
  group_id = NULL,
  map_id = "leaf"
)
```

Arguments

data	An sf object of geometry type point/multipoint, linestring/multilinestring or polygon/multipolygon geometry type. Required input.
popup	TRUE or FALSE of whether to have a popup.
popup_vars_vctr	Vector of quoted variable names to include in the popup. If NULL, defaults to making a leafpop::popupTable of all columns.
popup_numeric_format	A function to format all numeric variables within the popup column. Defaults to non-scientific. Use function(x) x to leave as is.
popup_vars_rename	Function to rename column names for the popup. Defaults to snakecase::to_sentence_case. Use function(x) x to leave column names untransformed.
pal	Character vector of hex codes.
size_point	Size of points (i.e. radius). Defaults to 2.
size_line	Size of lines around features (i.e. weight). Defaults to 2.
alpha_point	The opacity of the points.

alpha_line	The opacity of the outline.
alpha_fill	The opacity of the fill.
basemap	The underlying basemap. Either "light", "dark", "satellite", "street", or "ocean". Defaults to "light". Only applicable where shiny equals FALSE.
layer_id_var	Unquoted variable to be used in shiny, so that in the event where a feature is clicked on, the value of this is returned for that feature (e.g. input\$map_marker_click\$id).
group_id	The id name for the sf group.
map_id	The map id for the leaflet map. Defaults to "leaf".

Value

A leaflet object.

Examples

```
## Not run:
leaf_sf(example_point)

leaf_sf(example_polygon)

## End(Not run)
```

leaf_sf_col	<i>Simple feature leaflet map that is coloured.</i>
-------------	---

Description

Map of simple features in leaflet that is coloured.

Usage

```
leaf_sf_col(
  data,
  col_var,
  label_var = NULL,
  popup = TRUE,
  popup_vars_vctr = NULL,
  popup_numeric_format = function(x) prettyNum(x, big.mark = "", scientific = FALSE),
  popup_vars_rename = snakecase::to_sentence_case,
  pal = NULL,
  pal_na = "#7F7F7F",
  pal_rev = FALSE,
  alpha_point = NULL,
  alpha_line = NULL,
  alpha_fill = NULL,
```

```

    size_point = 2,
    size_line = 2,
    basemap = "light",
    col_breaks_n = 4,
    col_cuts = NULL,
    col_intervals_left = TRUE,
    col_labels = NULL,
    col_legend_none = FALSE,
    col_method = NULL,
    col_na_rm = FALSE,
    col_title = NULL,
    label_numeric_format = function(x) prettyNum(x, big.mark = ",", scientific = FALSE),
    layer_id_var = NULL,
    group_id = NULL,
    legend_id = NULL,
    map_id = "leaf"
  )

```

Arguments

<code>data</code>	An sf object of geometry type point/multipoint, linestring/multilinestring or polygon/multipolygon geometry type. Required input.
<code>col_var</code>	Unquoted variable to colour the features by. Required input.
<code>label_var</code>	Unquoted variable to label the features by. If NULL, defaults to using the colour variable.
<code>popup</code>	TRUE or FALSE of whether to have a popup.
<code>popup_vars_vctr</code>	Vector of quoted variable names to include in the popup. If NULL, defaults to making a leafpopup::popupTable of all columns.
<code>popup_numeric_format</code>	A function to format all numeric variables within the popup column. Defaults to non-scientific. Use function(x) x to leave as is.
<code>popup_vars_rename</code>	Function to rename column names for the popup. Defaults to snakecase::to_sentence_case. Use function(x) x to leave column names untransformed.
<code>pal</code>	Character vector of hex codes.
<code>pal_na</code>	The hex code or name of the NA colour to be used.
<code>pal_rev</code>	Reverses the palette. Defaults to FALSE.
<code>alpha_point</code>	The opacity of the points.
<code>alpha_line</code>	The opacity of the outline.
<code>alpha_fill</code>	The opacity of the fill.
<code>size_point</code>	Size of points (i.e. radius). Defaults to 2.
<code>size_line</code>	Size of lines around features (i.e. weight). Defaults to 2.
<code>basemap</code>	The underlying basemap. Either "light", "dark", "satellite", "street", or "ocean". Defaults to "light". Only applicable where shiny equals FALSE.

<code>col_breaks_n</code>	For a numeric colour variable, the desired number of intervals on the colour scale.
<code>col_cuts</code>	A vector of cuts to colour a numeric variable. If "bin" is selected, the first number in the vector should be either <code>-Inf</code> or <code>0</code> , and the final number <code>Inf</code> . If "quantile" is selected, the first number in the vector should be <code>0</code> and the final number should be <code>1</code> . Defaults to quartiles.
<code>col_intervals_left</code>	For a numeric colour variable, <code>TRUE</code> or <code>FALSE</code> of whether bins or quantiles are to be cut left-closed. Defaults to <code>TRUE</code> .
<code>col_labels</code>	A function or named vector to modify the colour scale labels. Defaults to <code>snake-case::to_sentence_case</code> if categorical, and <code>scales::label_comma()</code> if numeric. Use <code>function(x) x</code> to keep labels untransformed.
<code>col_legend_none</code>	<code>TRUE</code> or <code>FALSE</code> of whether to remove the legend.
<code>col_method</code>	The method of colouring features, either "bin", "quantile", "continuous", or "category." If numeric, defaults to "bin".
<code>col_na_rm</code>	<code>TRUE</code> or <code>FALSE</code> of whether to include <code>col_var</code> NA values. Defaults to <code>FALSE</code> .
<code>col_title</code>	A title string that will be wrapped into the legend.
<code>label_numeric_format</code>	A function to format the numeric labels. Defaults to adding a comma separator. Use <code>function(x) x</code> to leave as is.
<code>layer_id_var</code>	Unquoted variable to be used in shiny, so that in the event where a feature is clicked on, the value of this is returned for that feature (e.g. <code>input\$map_marker_click\$id</code>).
<code>group_id</code>	The id name for the sf group.
<code>legend_id</code>	The id name for the layerId of the legend.
<code>map_id</code>	The map id for the leaflet map. Defaults to "leaf".

Value

A leaflet object.

Examples

```
## Not run:
leaf_sf_col(example_point,
            col_var = trend_category)

leaf_sf_col(example_polygon,
            col_var = density)

leaf_sf_col(example_polygon,
            col_var = density,
            col_method = "bin",
            col_breaks_n = 5)

leaf_sf_col(example_polygon,
            col_var = density,
```



```

      col_method = "bin",
      col_cuts = c(0, 10, 50, 100, 150, 200, Inf))

leaf_sf_col(example_polygon,
            col_var = density,
            col_method = "quantile",
            col_breaks_n = 4)

leaf_sf_col(example_polygon,
            col_var = density,
            col_method = "quantile",
            col_cuts = c(0, 0.25, 0.5, 0.75, 0.95, 1))

## End(Not run)

```

leaf_stars	<i>Stars leaflet map.</i>
------------	---------------------------

Description

Map of stars in leaflet that is not coloured.

Usage

```

leaf_stars(
  data,
  pal = pal_viridis_mix(1),
  alpha_fill = 0.5,
  basemap = "light",
  group_id = NULL,
  map_id = "map"
)

```

Arguments

data	A stars object. Required input.
pal	Character vector of hex codes.
alpha_fill	The opacity of the fill. Defaults to 0.5.
basemap	The underlying basemap. Either "light", "dark", "satellite", "street", or "ocean". Defaults to "light". Only applicable where shiny equals FALSE.
group_id	The id name for the stars group.
map_id	The map id for the leaflet map. Defaults to "map".

Value

A leaflet object.

Examples

```
## Not run:
library(simplevis)

leaf_stars(example_stars)

## End(Not run)
```

leaf_stars_col	<i>Stars leaflet map that is coloured.</i>
----------------	--

Description

Map of stars in leaflet that is coloured.

Usage

```
leaf_stars_col(
  data,
  col_var,
  pal = NULL,
  pal_na = "#7F7F7F",
  pal_rev = FALSE,
  alpha_fill = 1,
  basemap = "light",
  col_breaks_n = 4,
  col_cuts = NULL,
  col_intervals_left = TRUE,
  col_labels = NULL,
  col_legend_none = FALSE,
  col_method = NULL,
  col_na_rm = FALSE,
  col_title = NULL,
  group_id = NULL,
  legend_id = NULL,
  map_id = "map"
)
```

Arguments

data	A stars object. Required input.
col_var	Unquoted attribute to colour the features by. Required input.
pal	Character vector of hex codes.
pal_na	The hex code or name of the NA colour to be used.
pal_rev	Reverses the palette. Defaults to FALSE.

alpha_fill	The opacity of the fill. Defaults to 1.
basemap	The underlying basemap. Either "light", "dark", "satellite", "street", or "ocean". Defaults to "light". Only applicable where shiny equals FALSE.
col_breaks_n	For a numeric colour variable, the desired number of intervals on the colour scale.
col_cuts	A vector of cuts to colour a numeric variable. If "bin" is selected, the first number in the vector should be either -Inf or 0, and the final number Inf. If "quantile" is selected, the first number in the vector should be 0 and the final number should be 1. Defaults to quartiles.
col_intervals_left	For a numeric colour variable, TRUE or FALSE of whether bins or quantiles are to be cut left-closed. Defaults to TRUE.
col_labels	A function or named vector to modify the colour scale labels. Defaults to stringr::str_to_sentence if categorical, and scales::label_comma if numeric. Use function(x) x to keep labels untransformed.
col_legend_none	TRUE or FALSE of whether to remove the legend.
col_method	The method of colouring features, either "bin", "quantile", "continuous", or "category." If numeric, defaults to "bin".
col_na_rm	TRUE or FALSE of whether to visualise col_var NA values. Defaults to FALSE.
col_title	A title string that will be wrapped into the legend.
group_id	The id name for the stars group.
legend_id	The id name for the layerId of the legend.
map_id	The map id for the leaflet map. Defaults to "map".

Value

A leaflet object.

Examples

```
## Not run:
library(simplevis)

leaf_stars_col(example_stars,
               col_var = nitrate,
               col_na_rm = TRUE)

## End(Not run)
```

Index

* datasets

- [example_borders](#), 2
- [example_point](#), 2
- [example_polygon](#), 3
- [example_stars](#), 3

- [example_borders](#), 2
- [example_point](#), 2
- [example_polygon](#), 3
- [example_stars](#), 3

- [leaf_basemap](#), 3
- [leaf_clear](#), 4
- [leaf_sf](#), 5
- [leaf_sf_col](#), 6
- [leaf_stars](#), 9
- [leaf_stars_col](#), 10