Package 'simplevis'

July 7, 2020

Type Package

Title Simple Visualisation with 'ggplot2' and 'leaflet' Wrappers

Version 1.5.0

Description Provides 'ggplot2' and 'leaflet' wrapper functions designed to simplify the creation of high quality graph and map visualisations. These functions only require inputs of data, variables and titles to provide beautiful interactive or image visualisations. However they allow for more flexibility if required. The intent is that high quality well-designed graphs and maps can be made more consistently with less effort, code and expertise than would otherwise be required.

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 (>= 1.0.0), DT, forcats, ggplot2 (>= 3.3.0), htmltools, leaflet (>= 2.0.0), leafpop, leaflet.extras, janitor, lubridate, magrittr, methods, plotly, readr, rgdal, rmarkdown, rlang (>= 0.4.0), scales, sf (>= 0.9.0), shiny, shinycssloaders, stars (>= 0.4.1), stats, stringr (>= 1.4.0), tibble (>= 3.0.0), tidyr (>= 1.0.0), viridis

Suggests knitr

RoxygenNote 6.1.1

VignetteBuilder knitr

NeedsCompilation no

Author David Hodge [aut, cre] (<https://orcid.org/0000-0002-3868-7501>), Statistics New Zealand [cph]

Maintainer David Hodge <davidhodge931@gmail.com>

Repository CRAN

Date/Publication 2020-07-07 09:00:02 UTC

R topics documented:

`a4_height_mm` *A4 useable height.*

Description

The height of useable space within an a4 sheet.

Usage

```
a4_height_mm
```

Format

An object of class `numeric` of length 1.

Value

A numeric value.

a4_width_mm *A4 useable width.*

Description

The width of useable space within an a4 sheet.

Usage

```
a4_width_mm
```

Format

An object of class `numeric` of length 1.

Value

A numeric value.

example_sf_nz_livestock *Example sf object of New Zealand livestock.*

Description

Example sf object of New Zealand livestock.

Usage

```
example_sf_nz_livestock
```

Format

An `sf` object.

Examples

```
example_sf_nz_livestock
```

`example_sf_nz_river_wq` *Example sf object of New Zealand river water quality trends.*

Description

Example sf object of New Zealand river water quality trends.

Usage

```
example_sf_nz_river_wq
```

Format

An `sf` object.

Examples

```
example_sf_nz_river_wq
```

`example_stars_nz_drp` *Example stars object of New Zealand modelled river water DRP concentrations.*

Description

Example stars object of New Zealand modelled river water dissolved reactive phosphorus concentrations.

Usage

```
example_stars_nz_drp
```

Format

An `stars` object.

Examples

```
example_stars_nz_drp
```

example_stars_nz_no3n *Example stars object of New Zealand modelled river water NO3N concentrations.*

Description

Example stars object of New Zealand modelled river water nitrate concentrations.

Usage

```
example_stars_nz_no3n
```

Format

An `stars` object.

Examples

```
example_stars_nz_no3n
```

ggplot_box *Vertical box ggplot.*

Description

Vertical box ggplot that is not coloured and not facetted.

Usage

```
ggplot_box(data, x_var, y_var = NULL, stat = "boxplot",
  x_scale_labels = waiver(), y_scale_zero = TRUE,
  y_scale_zero_line = TRUE, y_scale_trans = "identity",
  y_scale_labels = waiver(), pal = NULL, title = "[Title]",
  subtitle = NULL, x_title = "[X title]", y_title = "[Y title]",
  caption = NULL, font_family = "Helvetica", font_size_title = NULL,
  font_size_body = NULL, wrap_title = 70, wrap_subtitle = 80,
  wrap_x_title = 50, wrap_y_title = 50, wrap_caption = 80,
  isMobile = FALSE)
```

Arguments

data	A tibble or dataframe. Required input.
x_var	Unquoted categorical variable to be on the x axis. Required input.
y_var	Unquoted numeric variable to be on the y axis. Defaults to NULL. Required if stat equals "boxplot".
stat	String of "boxplot" or "identity". Defaults to "boxplot". If identity is selected, data provided must be grouped by the x_var with ymin, lower, middle, upper, ymax variables. Note "identity" does not provide outliers.
x_scale_labels	Argument to adjust the format of the x scale labels.
y_scale_zero	TRUE or FALSE of whether the minimum of the y scale is zero. Defaults to TRUE.
y_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
y_scale_trans	TRUEransformation of y-axis scale (e.g. "signed_sqrt"). Defaults to "identity", which has no transformation.
y_scale_labels	Argument to adjust the format of the y scale labels.
pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette.
title	Title string. Defaults to "[Title]".
subtitle	Subtitle string. Defaults to "[Subtitle]".
x_title	X axis title string. Defaults to "[X title]".
y_title	Y axis title string. Defaults to "[Y title]".
caption	Caption title string. Defaults to NULL.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_x_title	Number of characters to wrap the x title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_y_title	Number of characters to wrap the y title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile.

Value

A ggplot object.

Examples

```
plot_data <- iris %>%
tibble::as_tibble() %>%
  dplyr::mutate(Species = stringr::str_to_sentence(Species))

plot <- ggplot_box(data = plot_data, x_var = Species, y_var = Petal.Length,
                   title = "Iris petal length by species",
                   x_title = "Species",
                   y_title = "Petal length (cm)")

plot

plotly::ggplotly(plot, tooltip = "text")

plot_data <- iris %>%
  dplyr::group_by(Species) %>%
 dplyr::summarise(boxplot_stats = list(rlang::set_names(boxplot.stats(Petal.Length)$stats,
  c('ymin','lower','middle','upper','ymax')))) %>%
  tidyr::unnest_wider(boxplot_stats)

ggplot_box(data = plot_data, x_var = Species, y_var = Petal.Length, stat = "identity")
```

---

ggplot_box_facet *Vertical box ggplot that is facetted.*

Description

Vertical box ggplot that is facetted, but not coloured.

Usage

```
ggplot_box_facet(data, x_var, y_var = NULL, facet_var,
  stat = "boxplot", x_scale_labels = waiver(), y_scale_zero = TRUE,
  y_scale_zero_line = TRUE, y_scale_trans = "identity",
  y_scale_labels = waiver(), facet_scales = "fixed",
  facet_nrow = NULL, pal = NULL, title = "[Title]",
  subtitle = NULL, x_title = "[X title]", y_title = "[Y title]",
  caption = NULL, font_family = "Helvetica", font_size_title = NULL,
  font_size_body = NULL, wrap_title = 70, wrap_subtitle = 80,
  wrap_x_title = 50, wrap_y_title = 50, wrap_caption = 80,
  isMobile = FALSE)
```

Arguments

data	An tibble or dataframe. Required input.
x_var	Unquoted categorical variable to be on the x axis. Required input.
y_var	Unquoted numeric variable to be on the y axis. Defaults to NULL. Required if stat equals "boxplot".
facet_var	Unquoted categorical variable to facet the data by. Required input.
stat	String of "boxplot" or "identity". Defaults to "boxplot". If identity is selected, data provided must be grouped by the x_var and facet_var with ymin, lower, middle, upper, ymax variables. Note "identity" does not provide outliers.
x_scale_labels	Argument to adjust the format of the x scale labels.
y_scale_zero	TRUE or FALSE of whether the minimum of the y scale is zero. Defaults to TRUE.
y_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
y_scale_trans	TRUEransformation of y-axis scale (e.g. "signed_sqrt"). Defaults to "identity", which has no transformation.
y_scale_labels	Argument to adjust the format of the y scale labels.
facet_scales	Whether facet_scales should be "fixed" across facets, "free" in both directions, or free in just one direction (i.e. "free_x" or "free_y"). Defaults to "fixed".
facet_nrow	The number of rows of facetted plots. Defaults to NULL, which generally chooses 2 rows. Not applicable to where isMobile is TRUE.
pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette.
title	Title string. Defaults to "[Title]".
subtitle	Subtitle string. Defaults to "[Subtitle]".
x_title	X axis title string. Defaults to "[X title]".
y_title	Y axis title string. Defaults to "[Y title]".
caption	Caption title string. Defaults to NULL.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_x_title	Number of characters to wrap the x title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_y_title	Number of characters to wrap the y title to. Defaults to 50. Not applicable where isMobile equals TRUE.

wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile.

Value

A ggplot object.

Examples

```
plot_data <- ggplot2::diamonds %>%
  dplyr::mutate(price_thousands = (price / 1000)) %>%
  dplyr::sample_frac(0.05)

plot <- ggplot_box_facet(data = plot_data, x_var = cut, y_var = price_thousands, facet_var = color,
                         facet_nrow = 4)

plot

plotly::ggplotly(plot, tooltip = "text")
```

---

ggplot_hbar *Horizontal bar ggplot.*

Description

Horizontal bar ggplot that is not coloured and not facetted.

Usage

```
ggplot_hbar(data, x_var, y_var, hover_var = NULL,
  x_scale_labels = waiver(), x_scale_zero = TRUE,
  x_scale_zero_line = TRUE, x_scale_trans = "identity",
  y_scale_rev = FALSE, y_scale_labels = waiver(), pal = NULL,
  width = 0.75, na_grey = FALSE, na_grey_hover_value = "NA",
  title = "[Title]", subtitle = NULL, x_title = "[X title]",
  y_title = "[Y title]", caption = NULL, font_family = "Helvetica",
  font_size_title = NULL, font_size_body = NULL, wrap_title = 70,
  wrap_subtitle = 80, wrap_x_title = 50, wrap_y_title = 50,
  wrap_caption = 80, isMobile = FALSE)
```

Arguments

data	A tibble or dataframe. Required input.
x_var	Unquoted numeric variable to be on the x axis. Required input.
y_var	Unquoted categorical variable to be on the y axis. Required input.

hover_var	Unquoted variable to be an additional hover variable for when used inside plotly::ggplotly(). Defaults to NULL.
x_scale_labels	Argument to adjust the format of the x scale labels.
x_scale_zero	TRUE or FALSE whether the minimum of the x scale is zero. Defaults to TRUE.
x_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
x_scale_trans	A string specifying a transformation for the x axis scale. Defaults to "identity".
y_scale_rev	TRUE or FALSE of whether bar order from top to bottom is reversed from default. Defaults to FALSE.
y_scale_labels	Argument to adjust the format of the y scale labels.
pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette.
width	Width of bars. Defaults to 0.75.
na_grey	TRUE or FALSE of whether to provide wide grey bars for NA y_var values. Defaults to FALSE.
na_grey_hover_value	Value to provide to users in the hover for any NA grey bars. Defaults to "NA".
title	Title string. Defaults to [Title].
subtitle	Subtitle string. Defaults to [Subtitle].
x_title	X axis title string. Defaults to [X title].
y_title	Y axis title string. Defaults to [Y title].
caption	Caption title string. Defaults to NULL.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_x_title	Number of characters to wrap the x title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_y_title	Number of characters to wrap the y title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile.

Value

A ggplot object.

Examples

```
plot_data <- ggplot2::diamonds %>%
  dplyr::mutate(cut = stringr::str_to_sentence(cut)) %>%
  dplyr::group_by(cut) %>%
  dplyr::summarise(average_price = mean(price)) %>%
  dplyr::mutate(average_price_thousands = round(average_price / 1000, 1))

plot <- ggplot_hbar(data = plot_data, x_var = average_price_thousands, y_var = cut,
   title = "Average diamond price by cut",
   x_title = "Average price ($US thousands)",
   y_title = "Cut")

plot

plotly::ggplotly(plot, tooltip = "text")
```

---

ggplot_hbar_col *Horizontal bar ggplot that is coloured.*

Description

Horizontal bar ggplot that is coloured, but not facetted.

Usage

```
ggplot_hbar_col(data, x_var, y_var, col_var, hover_var = NULL,
  x_scale_labels = waiver(), x_scale_zero = TRUE,
  x_scale_zero_line = TRUE, x_scale_trans = "identity",
  y_scale_rev = FALSE, y_scale_labels = waiver(),
  col_scale_rev = FALSE, col_scale_drop = FALSE, position = "stack",
  pal = NULL, legend_ncol = 3, width = 0.75, title = "[Title]",
  subtitle = NULL, x_title = "[X title]", y_title = "[Y title]",
  col_title = "", caption = NULL, legend_labels = NULL,
  font_family = "Helvetica", font_size_title = NULL,
  font_size_body = NULL, wrap_title = 70, wrap_subtitle = 80,
  wrap_x_title = 50, wrap_y_title = 50, wrap_col_title = 25,
  wrap_caption = 80, isMobile = FALSE)
```

Arguments

data	A tibble or dataframe. Required input.
x_var	Unquoted numeric variable to be on the x axis. Required input.
y_var	Unquoted categorical variable to be on the y axis. Required input.
col_var	Unquoted categorical variable to colour the bars. Required input.
hover_var	Unquoted variable to be an additional hover variable for when used inside plotly::ggplotly(). Defaults to NULL.

x_scale_labels	Argument to adjust the format of the x scale labels.
x_scale_zero	TRUE or FALSE whether the minimum of the x scale is zero. Defaults to TRUE.
x_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
x_scale_trans	A string specifying a transformation for the x axis scale. Defaults to "identity".
y_scale_rev	TRUE or FALSE of whether bar order from top to bottom is reversed from default. Defaults to FALSE.
y_scale_labels	Argument to adjust the format of the y scale labels.
col_scale_rev	TRUE or FALSE of whether bar fill order from left to right is reversed from default. Defaults to FALSE.
col_scale_drop	TRUE or FALSE of whether to drop unused levels from the legend. Defaults to FALSE.
position	Whether bars are positioned by "stack" or "dodge". Defaults to "stack".
pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette.
legend_ncol	The number of columns in the legend.
width	Width of bars. Defaults to 0.75.
title	Title string. Defaults to [Title].
subtitle	Subtitle string. Defaults to [Subtitle].
x_title	X axis title string. Defaults to [X title].
y_title	Y axis title string. Defaults to [Y title].
col_title	Colour title string for the legend. Defaults to NULL.
caption	Caption title string. Defaults to NULL.
legend_labels	A vector of manual legend label values. Defaults to NULL, which results in automatic labels.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_x_title	Number of characters to wrap the x title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_y_title	Number of characters to wrap the y title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_col_title	Number of characters to wrap the colour title to. Defaults to 25. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile.

Value

A ggplot object.

Examples

```
plot_data <- ggplot2::diamonds %>%
  dplyr::mutate(cut = stringr::str_to_sentence(cut)) %>%
  dplyr::group_by(cut, clarity) %>%
  dplyr::summarise(average_price = mean(price)) %>%
  dplyr::mutate(average_price_thousands = round(average_price / 1000, 1)) %>%
  dplyr::ungroup()

plot <- ggplot_hbar_col(data = plot_data,
                        x_var = average_price_thousands,
                        y_var = cut,
                        col_var = clarity,
                        legend_ncol = 4,
                        title = "Average diamond price by cut and clarity",
                        x_title = "Average price ($US thousands)",
                        y_title = "Cut")

plot

plotly::ggplotly(plot, tooltip = "text")
```

---

ggplot_hbar_col_facet *Horizontal bar ggplot that is coloured and facetted.*

Description

Horizontal bar ggplot that is coloured and facetted.

Usage

```
ggplot_hbar_col_facet(data, x_var, y_var, col_var, facet_var,
  hover_var = NULL, x_scale_labels = waiver(), x_scale_zero = TRUE,
  x_scale_zero_line = TRUE, x_scale_trans = "identity",
  y_scale_rev = FALSE, y_scale_labels = waiver(),
  col_scale_rev = FALSE, col_scale_drop = FALSE, position = "stack",
  facet_scales = "fixed", facet_nrow = NULL, pal = NULL,
  legend_ncol = 3, width = 0.75, title = "[Title]",
  subtitle = NULL, x_title = "[X title]", y_title = "[Y title]",
  col_title = "", caption = NULL, legend_labels = NULL,
  font_family = "Helvetica", font_size_title = NULL,
  font_size_body = NULL, wrap_title = 70, wrap_subtitle = 80,
  wrap_x_title = 50, wrap_y_title = 50, wrap_col_title = 25,
  wrap_caption = 80, isMobile = FALSE)
```

Arguments

data	A tibble or dataframe. Required input.
x_var	Unquoted numeric variable to be on the x axis. Required input.
y_var	Unquoted categorical variable to be on the y axis. Required input.
col_var	Unquoted categorical variable to colour the bars. Required input.
facet_var	Unquoted categorical variable to facet the data by. Required input.
hover_var	Unquoted variable to be an additional hover variable for when used inside plotly::ggplotly(). Defaults to NULL.
x_scale_labels	Argument to adjust the format of the x scale labels.
x_scale_zero	TRUE or FALSE whether the minimum of the x scale is zero. Defaults to TRUE.
x_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
x_scale_trans	A string specifying a transformation for the x scale. Defaults to "identity".
y_scale_rev	TRUE or FALSE of whether bar order from top to bottom is reversed from default. Defaults to FALSE.
y_scale_labels	Argument to adjust the format of the y scale labels.
col_scale_rev	TRUE or FALSE of whether bar fill order from left to right is reversed from default. Defaults to FALSE.
col_scale_drop	TRUE or FALSE of whether to drop unused levels from the legend. Defaults to FALSE.
position	Whether bars are positioned by "stack" or "dodge". Defaults to "stack".
facet_scales	Whether facet_scales should be "fixed" across facets, "free" in both directions, or free in just one direction (i.e. "free_x" or "free_y"). Defaults to "fixed".
facet_nrow	The number of rows of facetted plots. Defaults to NULL, which generally chooses 2 rows. Not applicable to where isMobile is TRUE.
pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette.
legend_ncol	The number of columns in the legend.
width	Width of bars. Defaults to 0.75.
title	Title string. Defaults to [Title].
subtitle	Subtitle string. Defaults to [Subtitle].
x_title	X axis title string. Defaults to [X title].
y_title	Y axis title string. Defaults to [Y title].
col_title	Colour title string for the legend. Defaults to NULL.
caption	Caption title string. Defaults to NULL.
legend_labels	A vector of manual legend label values. Defaults to NULL, which results in automatic labels.
font_family	Font family to use. Defaults to "Helvetica".

font_size_title
: Font size for the title text. Defaults to 11.

font_size_body
: Font size for all text other than the title. Defaults to 10.

wrap_title
: Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.

wrap_subtitle
: Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.

wrap_x_title
: Number of characters to wrap the x title to. Defaults to 50. Not applicable where isMobile equals TRUE.

wrap_y_title
: Number of characters to wrap the y title to. Defaults to 50. Not applicable where isMobile equals TRUE.

wrap_col_title
: Number of characters to wrap the colour title to. Defaults to 25. Not applicable where isMobile equals TRUE.

wrap_caption
: Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.

isMobile
: Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile.

Value

A ggplot object.

Examples

```
plot_data <- ggplot2::diamonds %>%
  dplyr::mutate(cut = stringr::str_to_sentence(cut)) %>%
  dplyr::group_by(cut, clarity, color) %>%
  dplyr::summarise(average_price = mean(price)) %>%
  dplyr::mutate(average_price_thousands = round(average_price / 1000, 1))

plot <- ggplot_hbar_col_facet(data = plot_data, x_var = average_price_thousands,
                              y_var = color, col_var = clarity, facet_var = cut,
                             title = "Average diamond price by colour, clarity and cut",
                              x_title = "Average price ($US thousands)",
                              y_title = "Colour")

plot

plotly::ggplotly(plot, tooltip = "text")
```

---

ggplot_hbar_facet *Horizontal bar ggplot that is facetted.*

Description

Horizontal bar ggplot that is facetted, but not coloured.

Usage

```
ggplot_hbar_facet(data, x_var, y_var, facet_var, hover_var = NULL,
  x_scale_labels = waiver(), x_scale_zero = TRUE,
  x_scale_zero_line = TRUE, x_scale_trans = "identity",
  y_scale_rev = FALSE, y_scale_labels = waiver(),
  facet_scales = "fixed", facet_nrow = NULL, pal = NULL,
  width = 0.75, title = "[Title]", na_grey = FALSE,
  na_grey_hover_value = "NA", subtitle = NULL, x_title = "[X title]",
  y_title = "[Y title]", caption = NULL, font_family = "Helvetica",
  font_size_title = NULL, font_size_body = NULL, wrap_title = 70,
  wrap_subtitle = 80, wrap_x_title = 50, wrap_y_title = 50,
  wrap_caption = 80, isMobile = FALSE)
```

Arguments

data	A tibble or dataframe. Required input.
x_var	Unquoted numeric variable to be on the x axis. Required input.
y_var	Unquoted categorical variable to be on the y axis. Required input.
facet_var	Unquoted categorical variable to facet the data by. Required input.
hover_var	Unquoted variable to be an additional hover variable for when used inside plotly::ggplotly(). Defaults to NULL.
x_scale_labels	Argument to adjust the format of the x scale labels.
x_scale_zero	TRUE or FALSE whether the minimum of the x scale is zero. Defaults to TRUE.
x_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
x_scale_trans	A string specifying a transformation for the x scale. Defaults to "identity".
y_scale_rev	TRUE or FALSE of whether bar order from top to bottom is reversed from default. Defaults to FALSE.
y_scale_labels	Argument to adjust the format of the y scale labels.
facet_scales	Whether facet_scales should be "fixed" across facets, "free" in both directions, or free in just one direction (i.e. "free_x" or "free_y"). Defaults to "fixed".
facet_nrow	The number of rows of facetted plots. Defaults to NULL, which generally chooses 2 rows. Not applicable to where isMobile is TRUE.
pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette.
width	Width of bars. Defaults to 0.75.
title	Title string. Defaults to [Title].
na_grey	TRUE or FALSE of whether to provide wide grey bars for NA y_var values. Only works where facet_scales = "fixed" or "free_y". Defaults to FALSE.
na_grey_hover_value	Value to provide to users in the hover for any NA grey bars. Defaults to "NA".
subtitle	Subtitle string. Defaults to [Subtitle].

x_title	X axis title string. Defaults to [X title].
y_title	Y axis title string. Defaults to [Y title].
caption	Caption title string. Defaults to NULL.
font_family	Font family to use. Defaults NULL.
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_x_title	Number of characters to wrap the x title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_y_title	Number of characters to wrap the y title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile.

Value

A ggplot object.

Examples

```
plot_data <- ggplot2::diamonds %>%
  dplyr::mutate(cut = stringr::str_to_sentence(cut)) %>%
  dplyr::group_by(cut, clarity) %>%
  dplyr::summarise(average_price = mean(price)) %>%
  dplyr::mutate(average_price_thousands = round(average_price / 1000, 1))

plot <- ggplot_hbar_facet(data = plot_data, x_var = average_price_thousands,
                          y_var = cut, facet_var = clarity,
                         title = "Average diamond price by cut and clarity",
                         x_title = "Average price ($US thousands)",
                         y_title = "Cut")

plot

plotly::ggplotly(plot, tooltip = "text")
```

ggplot_line *Line ggplot.*

Description

Line ggplot that is not coloured and not facetted.

Usage

```
ggplot_line(data, x_var, y_var, hover_var = NULL,
  x_scale_labels = waiver(), y_scale_zero = TRUE,
  y_scale_zero_line = TRUE, y_scale_trans = "identity",
  y_scale_labels = waiver(), points = TRUE, point_size = 1,
  lines = TRUE, pal = NULL, title = "[Title]", subtitle = NULL,
  x_title = "[X title]", y_title = "[Y title]", caption = NULL,
  font_family = "Helvetica", font_size_title = NULL,
  font_size_body = NULL, wrap_title = 70, wrap_subtitle = 80,
  wrap_x_title = 50, wrap_y_title = 50, wrap_caption = 80,
  isMobile = FALSE)
```

Arguments

data	A tibble or dataframe. Required input.
x_var	Unquoted numeric or date variable to be on the x axis. Required input.
y_var	Unquoted numeric variable to be on the y axis. Required input.
hover_var	Unquoted variable to be an additional hover variable for when used inside plotly::ggplotly(). Defaults to NULL.
x_scale_labels	Argument to adjust the format of the x scale labels.
y_scale_zero	TRUE or FALSE whether the minimum of the y scale is zero. Defaults to TRUE.
y_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
y_scale_trans	A string specifying a transformation for the y axis scale, such as "log10" or "sqrt". Defaults to "identity".
y_scale_labels	Argument to adjust the format of the y scale labels.
points	TRUE or FALSE of whether to include points. Defaults to TRUE.
point_size	Size of points. Defaults to 1. Only applicable to where points equals TRUE.
lines	TRUE or FALSE of whether to include lines. Defaults to TRUE.
pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette.
title	Title string. Defaults to "[Title]".
subtitle	Subtitle string. Defaults to "[Subtitle]".

x_title	X axis title string. Defaults to "[X title]".
y_title	Y axis title string. Defaults to "[Y title]".
caption	Caption title string. Defaults to NULL.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_x_title	Number of characters to wrap the x title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_y_title	Number of characters to wrap the y title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile.

Value

A ggplot object.

Examples

```
plot_data <- dplyr::storms %>%
  dplyr::group_by(year) %>%
  dplyr::summarise(wind = round(mean(wind), 2))

  plot <- ggplot_line(data = plot_data, x_var = year, y_var = wind,
      title = "Average wind speed of Atlantic storms, 1975-2015",
      x_title = "Year",
      y_title = "Average maximum sustained wind speed (knots)")

  plot

  plotly::ggplotly(plot, tooltip = "text")
```

ggplot_line_col *Line ggplot that is coloured.*

Description

Line ggplot that is coloured, but not facetted.

Usage

```
ggplot_line_col(data, x_var, y_var, col_var, hover_var = NULL,
  x_scale_labels = waiver(), y_scale_zero = TRUE,
  y_scale_zero_line = TRUE, y_scale_trans = "identity",
  y_scale_labels = waiver(), col_scale_drop = FALSE, points = TRUE,
  point_size = 1, lines = TRUE, pal = NULL, rev_pal = FALSE,
  legend_ncol = 3, title = "[Title]", subtitle = NULL,
  x_title = "[X title]", y_title = "[Y title]", col_title = "",
  caption = NULL, legend_labels = NULL, font_family = "Helvetica",
  font_size_title = NULL, font_size_body = NULL, wrap_title = 70,
  wrap_subtitle = 80, wrap_x_title = 50, wrap_y_title = 50,
  wrap_col_title = 25, wrap_caption = 80, isMobile = FALSE)
```

Arguments

data	A tibble or dataframe. Required input.
x_var	Unquoted numeric or date variable to be on the x axis. Required input.
y_var	Unquoted numeric variable to be on the y axis. Required input.
col_var	Unquoted categorical variable for lines and points to be coloured by. Required input.
hover_var	Unquoted variable to be an additional hover variable for when used inside plotly::ggplotly(). Defaults to NULL.
x_scale_labels	Argument to adjust the format of the x scale labels.
y_scale_zero	TRUE or FALSE whether the minimum of the y scale is zero. Defaults to TRUE.
y_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
y_scale_trans	A string specifying a transformation for the y axis scale, such as "log10" or "sqrt". Defaults to "identity".
y_scale_labels	Argument to adjust the format of the y scale labels.
col_scale_drop	TRUE or FALSE of whether to drop unused levels from the legend. Defaults to FALSE.
points	TRUE or FALSE of whether to include points. Defaults to TRUE.
point_size	Size of points. Defaults to 1. Only applicable to where points equals TRUE.
lines	TRUE or FALSE of whether to include lines. Defaults to TRUE.

pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette.
rev_pal	Reverses the palette. Defaults to FALSE.
legend_ncol	The number of columns in the legend.
title	Title string. Defaults to "[Title]".
subtitle	Subtitle string. Defaults to "[Subtitle]".
x_title	X axis title string. Defaults to "[X title]".
y_title	Y axis title string. Defaults to "[Y title]".
col_title	Colour title string for the legend. Defaults to NULL.
caption	Caption title string. Defaults to NULL.
legend_labels	A vector of manual legend label values. Defaults to NULL, which results in automatic labels.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_x_title	Number of characters to wrap the x title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_y_title	Number of characters to wrap the y title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_col_title	Number of characters to wrap the colour title to. Defaults to 25. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile.

Value

A ggplot object.

Examples

```
plot_data <- dplyr::storms %>%
  dplyr::mutate(status = stringr::str_to_sentence(status)) %>%
  dplyr::group_by(year, status) %>%
  dplyr::summarise(wind = round(mean(wind), 2))

plot <- ggplot_line_col(data = plot_data, x_var = year, y_var = wind, col_var = status)
```

```
plot

plotly::ggplotly(plot, tooltip = "text")
```

`ggplot_line_col_facet` *Line ggplot that is coloured and facetted.*

Description

Line ggplot that is coloured and facetted.

Usage

```
ggplot_line_col_facet(data, x_var, y_var, col_var, facet_var,
  hover_var = NULL, x_scale_labels = waiver(), y_scale_zero = TRUE,
  y_scale_zero_line = TRUE, y_scale_trans = "identity",
  y_scale_labels = waiver(), col_scale_drop = FALSE,
  facet_scales = "fixed", facet_nrow = NULL, points = TRUE,
  point_size = 1, lines = TRUE, pal = NULL, rev_pal = FALSE,
  legend_ncol = 3, title = "[Title]", subtitle = NULL,
  x_title = "[X title]", y_title = "[Y title]", col_title = "",
  caption = NULL, legend_labels = NULL, font_family = "Helvetica",
  font_size_title = NULL, font_size_body = NULL, wrap_title = 70,
  wrap_subtitle = 80, wrap_x_title = 50, wrap_y_title = 50,
  wrap_col_title = 25, wrap_caption = 80, isMobile = FALSE)
```

Arguments

`data`	A tibble or dataframe. Required input.
`x_var`	Unquoted numeric or date variable to be on the x axis. Required input.
`y_var`	Unquoted numeric variable to be on the y axis. Required input.
`col_var`	Unquoted categorical variable for lines and points to be coloured by. Required input.
`facet_var`	Unquoted categorical variable to facet the data by. Required input.
`hover_var`	Unquoted variable to be an additional hover variable for when used inside plotly::ggplotly(). Defaults to NULL.
`x_scale_labels`	Argument to adjust the format of the x scale labels.
`y_scale_zero`	TRUE or FALSE whether the minimum of the y scale is zero. Defaults to TRUE.
`y_scale_zero_line`	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
`y_scale_trans`	A string specifying a transformation for the y axis scale, such as "log10" or "sqrt". Defaults to "identity".
`y_scale_labels`	Argument to adjust the format of the y scale labels.

col_scale_drop	TRUE or FALSE of whether to drop unused levels from the legend. Defaults to FALSE.
facet_scales	Whether facet_scales should be "fixed" across facets, "free" in both directions, or free in just one direction (i.e. "free_x" or "free_y"). Defaults to "fixed".
facet_nrow	The number of rows of facetted plots. Defaults to NULL, which generally chooses 2 rows. Not applicable to where isMobile is TRUE.
points	TRUE or FALSE of whether to include points. Defaults to TRUE.
point_size	Size of points. Defaults to 1. Only applicable to where points equals TRUE.
lines	TRUE or FALSE of whether to include lines. Defaults to TRUE.
pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette.
rev_pal	Reverses the palette. Defaults to FALSE.
legend_ncol	The number of columns in the legend.
title	Title string. Defaults to "[Title]".
subtitle	Subtitle string. Defaults to "[Subtitle]".
x_title	X axis title string. Defaults to "[X title]".
y_title	Y axis title string. Defaults to "[Y title]".
col_title	Colour title string for the legend. Defaults to NULL.
caption	Caption title string. Defaults to NULL.
legend_labels	A vector of manual legend label values. Defaults to NULL, which results in automatic labels.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_x_title	Number of characters to wrap the x title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_y_title	Number of characters to wrap the y title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_col_title	Number of characters to wrap the colour title to. Defaults to 25. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile.

Value

A ggplot object.

Examples

```
plot_data <- dplyr::storms %>%
  dplyr::mutate(status = stringr::str_to_sentence(status)) %>%
  dplyr::group_by(year, status) %>%
  dplyr::summarise(wind = round(mean(wind), 2))

plot <- ggplot_line_col_facet(data = plot_data, x_var = year, y_var = wind, col_var = status,
                              facet_var = status)

plot

plotly::ggplotly(plot, tooltip = "text")
```

---

ggplot_line_facet *Line ggplot that is facetted.*

Description

Line ggplot that is facetted, but not coloured.

Usage

```
ggplot_line_facet(data, x_var, y_var, facet_var, hover_var = NULL,
  x_scale_labels = waiver(), y_scale_zero = TRUE,
  y_scale_zero_line = TRUE, y_scale_trans = "identity",
  y_scale_labels = waiver(), facet_scales = "fixed",
  facet_nrow = NULL, points = TRUE, point_size = 1, lines = TRUE,
  pal = NULL, title = "[Title]", subtitle = NULL,
  x_title = "[X title]", y_title = "[Y title]", caption = NULL,
  font_family = "Helvetica", font_size_title = NULL,
  font_size_body = NULL, wrap_title = 70, wrap_subtitle = 80,
  wrap_x_title = 50, wrap_y_title = 50, wrap_caption = 80,
  isMobile = FALSE)
```

Arguments

data	A tibble or dataframe. Required input.
x_var	Unquoted numeric or date variable to be on the x axis. Required input.
y_var	Unquoted numeric variable to be on the y axis. Required input.
facet_var	Unquoted categorical variable to facet the data by. Required input.
hover_var	Unquoted variable to be an additional hover variable for when used inside plotly::ggplotly(). Defaults to NULL.

x_scale_labels	Argument to adjust the format of the x scale labels.
y_scale_zero	TRUE or FALSE whether the minimum of the y scale is zero. Defaults to TRUE.
y_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
y_scale_trans	A string specifying a transformation for the y axis scale, such as "log10" or "sqrt". Defaults to "identity".
y_scale_labels	Argument to adjust the format of the y scale labels.
facet_scales	Whether facet_scales should be "fixed" across facets, "free" in both directions, or free in just one direction (i.e. "free_x" or "free_y"). Defaults to "fixed".
facet_nrow	The number of rows of facetted plots. Defaults to NULL, which generally chooses 2 rows. Not applicable to where isMobile is TRUE.
points	TRUE or FALSE of whether to include points. Defaults to TRUE.
point_size	Size of points. Defaults to 1. Only applicable to where points equals TRUE.
lines	TRUE or FALSE of whether to include lines. Defaults to TRUE.
pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette.
title	Title string. Defaults to "[Title]".
subtitle	Subtitle string. Defaults to "[Subtitle]".
x_title	X axis title string. Defaults to "[X title]".
y_title	Y axis title string. Defaults to "[Y title]".
caption	Caption title string. Defaults to NULL.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_x_title	Number of characters to wrap the x title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_y_title	Number of characters to wrap the y title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile.

Value

A ggplot object.

Examples

```
plot_data <- dplyr::storms %>%
  dplyr::mutate(status = stringr::str_to_sentence(status)) %>%
  dplyr::group_by(year, status) %>%
  dplyr::summarise(wind = round(mean(wind), 2))

plot <- ggplot_line_facet(data = plot_data, x_var = year, y_var = wind, facet_var = status)

plot

plotly::ggplotly(plot, tooltip = "text")
```

`ggplot_scatter` *Scatter ggplot.*

Description

Scatter ggplot that is not coloured and not facetted.

Usage

```
ggplot_scatter(data, x_var, y_var, hover_var = NULL, size = 1,
  pal = NULL, x_scale_zero = TRUE, x_scale_zero_line = TRUE,
  x_scale_trans = "identity", x_scale_labels = waiver(),
  y_scale_zero = TRUE, y_scale_zero_line = TRUE,
  y_scale_trans = "identity", y_scale_labels = waiver(),
  title = "[Title]", subtitle = NULL, x_title = "[X title]",
  y_title = "[Y title]", caption = NULL, font_family = "Helvetica",
  font_size_title = NULL, font_size_body = NULL, wrap_title = 70,
  wrap_subtitle = 80, wrap_x_title = 50, wrap_y_title = 50,
  wrap_caption = 80, isMobile = FALSE)
```

Arguments

`data`	An ungrouped summarised tibble or dataframe. Required input.
`x_var`	Unquoted numeric variable to be on the x axis. Required input.
`y_var`	Unquoted numeric variable to be on the y axis. Required input.
`hover_var`	Unquoted variable to be an additional hover variable for when used inside plotly::ggplotly(). Defaults to NULL.
`size`	Size of points. Defaults to 1.
`pal`	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette.
`x_scale_zero`	TRUE or FALSE whether the minimum of the x scale is zero. Defaults to TRUE.
`x_scale_zero_line`	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.

x_scale_trans	A string specifying a transformation for the x scale. Defaults to "identity".
x_scale_labels	Argument to adjust the format of the x scale labels.
y_scale_zero	TRUE or FALSE whether the minimum of the y scale is zero. Defaults to TRUE.
y_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
y_scale_trans	A string specifying a transformation for the y scale. Defaults to "identity".
y_scale_labels	Argument to adjust the format of the y scale labels.
title	Title string. Defaults to "[Title]".
subtitle	Subtitle string. Defaults to "[Subtitle]".
x_title	X axis title string. Defaults to "[X title]".
y_title	Y axis title string. Defaults to "[Y title]".
caption	Caption title string. Defaults to NULL.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_x_title	Number of characters to wrap the x title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_y_title	Number of characters to wrap the y title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile.

Value

A ggplot object.

Examples

```
plot_data <- dplyr::sample_frac(ggplot2::diamonds, 0.05)

plot <- ggplot_scatter(data = plot_data, x_var = carat, y_var = price,
   title = "Diamond price by carat",
   x_title = "Carat",
   y_title = "Price ($US thousands)")

plot

plotly::ggplotly(plot, tooltip = "text")
```

ggplot_scatter_col *Scatter ggplot that is coloured.*

Description

Scatter ggplot that is coloured, but not facetted.

Usage

```
ggplot_scatter_col(data, x_var, y_var, col_var, hover_var = NULL,
  col_method = NULL, col_title = "", quantile_cuts = NULL,
  bin_cuts = NULL, size = 1, pal = NULL, rev_pal = FALSE,
  remove_na = FALSE, x_scale_zero = TRUE, x_scale_zero_line = TRUE,
  x_scale_trans = "identity", x_scale_labels = waiver(),
  y_scale_zero = TRUE, y_scale_zero_line = TRUE,
  y_scale_trans = "identity", y_scale_labels = waiver(),
  col_scale_drop = FALSE, legend_ncol = 3, legend_digits = 1,
  title = "[Title]", subtitle = NULL, x_title = "[X title]",
  y_title = "[Y title]", caption = NULL, legend_labels = NULL,
  font_family = "Helvetica", font_size_title = NULL,
  font_size_body = NULL, wrap_title = 70, wrap_subtitle = 80,
  wrap_x_title = 50, wrap_y_title = 50, wrap_col_title = 25,
  wrap_caption = 80, isMobile = FALSE)
```

Arguments

data	An ungrouped summarised tibble or dataframe. Required input.
x_var	Unquoted numeric variable to be on the x axis. Required input.
y_var	Unquoted numeric variable to be on the y axis. Required input.
col_var	Unquoted variable for points to be coloured by. Required input.
hover_var	Unquoted variable to be an additional hover variable for when used inside plotly::ggplotly(). Defaults to NULL.
col_method	The method of colouring features, either "bin", "quantile" or "category." If numeric, defaults to "quantile".
col_title	Colour title string for the legend. Defaults to NULL.
quantile_cuts	A vector of probability cuts applicable where col_method of "quantile" is selected. The first number in the vector should 0 and the final number 1. Defaults to quartiles.
bin_cuts	A vector of bin cuts applicable where col_method of "bin" is selected. The first number in the vector should be either -Inf or 0, and the final number Inf. If NULL, 'pretty' breaks are used.
size	Size of points. Defaults to 1.
pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette or viridis.

rev_pal	Reverses the palette. Defaults to FALSE.
remove_na	TRUE or FALSE of whether to remove NAs of the colour variable. Defaults to FALSE.
x_scale_zero	TRUE or FALSE whether the minimum of the x scale is zero. Defaults to TRUE.
x_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
x_scale_trans	A string specifying a transformation for the x scale. Defaults to "identity".
x_scale_labels	Argument to adjust the format of the x scale labels.
y_scale_zero	TRUE or FALSE whether the minimum of the y scale is zero. Defaults to TRUE.
y_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
y_scale_trans	A string specifying a transformation for the y scale. Defaults to "identity".
y_scale_labels	Argument to adjust the format of the y scale labels.
col_scale_drop	TRUE or FALSE of whether to drop unused levels from the legend. Defaults to FALSE.
legend_ncol	The number of columns in the legend.
legend_digits	Select the appropriate number of decimal places for numeric variable auto legend labels. Defaults to 1.
title	Title string. Defaults to "[Title]".
subtitle	Subtitle string. Defaults to "[Subtitle]".
x_title	X axis title string. Defaults to "[X title]".
y_title	Y axis title string. Defaults to "[Y title]".
caption	Caption title string. Defaults to NULL.
legend_labels	A vector of manual legend label values. Defaults to NULL, which results in automatic labels.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_x_title	Number of characters to wrap the x title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_y_title	Number of characters to wrap the y title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_col_title	Number of characters to wrap the colour title to. Defaults to 25. Not applicable where isMobile equals TRUE.

wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile.

Value

A ggplot object.

Examples

```
plot_data <- dplyr::sample_frac(ggplot2::diamonds, 0.05)

plot <- ggplot_scatter_col(data = plot_data, x_var = carat, y_var = price, col_var = color)

plot

plotly::ggplotly(plot, tooltip = "text")
```

---

ggplot_scatter_col_facet

Scatter ggplot that is coloured and facetted.

Description

Scatter ggplot that is coloured and facetted.

Usage

```
ggplot_scatter_col_facet(data, x_var, y_var, col_var, facet_var,
  hover_var = NULL, size = 1, pal = NULL, rev_pal = FALSE,
  remove_na = FALSE, x_scale_zero = TRUE, x_scale_zero_line = TRUE,
  x_scale_trans = "identity", x_scale_labels = waiver(),
  y_scale_zero = TRUE, y_scale_zero_line = TRUE,
  y_scale_trans = "identity", y_scale_labels = waiver(),
  col_scale_drop = FALSE, facet_scales = "fixed", facet_nrow = NULL,
  col_method = NULL, quantile_cuts = NULL, quantile_by_facet = TRUE,
  bin_cuts = NULL, legend_ncol = 3, legend_digits = 1,
  title = "[Title]", subtitle = NULL, x_title = "[X title]",
  y_title = "[Y title]", col_title = "", caption = NULL,
  legend_labels = NULL, font_family = "Helvetica",
  font_size_title = NULL, font_size_body = NULL, wrap_title = 70,
  wrap_subtitle = 80, wrap_x_title = 50, wrap_y_title = 50,
  wrap_col_title = 25, wrap_caption = 80, isMobile = FALSE)
```

Arguments

data	An ungrouped summarised tibble or dataframe. Required input.
x_var	Unquoted numeric variable to be on the x axis. Required input.
y_var	Unquoted numeric variable to be on the y axis. Required input.
col_var	Unquoted variable for points to be coloured by. Required input.
facet_var	Unquoted categorical variable to facet the data by. Required input.
hover_var	Unquoted variable to be an additional hover variable for when used inside plotly::ggplotly(). Defaults to NULL.
size	Size of points. Defaults to 1.
pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette or viridis.
rev_pal	Reverses the palette. Defaults to FALSE.
remove_na	TRUE or FALSE of whether to remove NAs of the colour variable. Defaults to FALSE.
x_scale_zero	TRUE or FALSE whether the minimum of the x scale is zero. Defaults to TRUE.
x_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
x_scale_trans	A string specifying a transformation for the x scale. Defaults to "identity".
x_scale_labels	Argument to adjust the format of the x scale labels.
y_scale_zero	TRUE or FALSE whether the minimum of the y scale is zero. Defaults to TRUE.
y_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
y_scale_trans	A string specifying a transformation for the y scale. Defaults to "identity".
y_scale_labels	Argument to adjust the format of the y scale labels.
col_scale_drop	TRUE or FALSE of whether to drop unused levels from the legend. Defaults to FALSE.
facet_scales	Whether facet_scales should be "fixed" across facets, "free" in both directions, or free in just one direction (i.e. "free_x" or "free_y"). Defaults to "fixed".
facet_nrow	The number of rows of facetted plots. Defaults to NULL, which generally chooses 2 rows. Not applicable to where isMobile is TRUE.
col_method	The method of colouring features, either "bin", "quantile" or "category." If numeric, defaults to "quantile".
quantile_cuts	A vector of probability cuts applicable where col_method of "quantile" is selected. The first number in the vector should 0 and the final number 1. Defaults to quartiles.
quantile_by_facet	TRUE of FALSE whether quantiles should be calculated for each group of the facet variable. Defaults to TRUE.

bin_cuts	A vector of bin cuts applicable where col_method of "bin" is selected. The first number in the vector should be either -Inf or 0, and the final number Inf. If NULL, 'pretty' breaks are used.
legend_ncol	The number of columns in the legend.
legend_digits	Select the appropriate number of decimal places for numeric variable auto legend labels. Defaults to 1.
title	Title string. Defaults to "[Title]".
subtitle	Subtitle string. Defaults to "[Subtitle]".
x_title	X axis title string. Defaults to "[X title]".
y_title	Y axis title string. Defaults to "[Y title]".
col_title	Colour title string for the legend. Defaults to NULL.
caption	Caption title string. Defaults to NULL.
legend_labels	A vector of manual legend label values. Defaults to NULL, which results in automatic labels.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_x_title	Number of characters to wrap the x title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_y_title	Number of characters to wrap the y title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_col_title	Number of characters to wrap the colour title to. Defaults to 25. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile.

Value

A ggplot object.

Examples

```
plot_data <- ggplot2::diamonds %>%
  dplyr::sample_frac(0.05) %>%
  dplyr::mutate(cut = stringr::str_to_sentence(cut))
```

```
plot <- ggplot_scatter_col_facet(data = plot_data, x_var = carat, y_var = price, col_var = color,
                                 facet_var = cut)

plot

plotly::ggplotly(plot, tooltip = "text")
```

---

ggplot_scatter_facet *Scatter ggplot that is facetted.*

Description

Scatter ggplot that is facetted, but not coloured.

Usage

```
ggplot_scatter_facet(data, x_var, y_var, facet_var, hover_var = NULL,
  size = 1, pal = NULL, x_scale_zero = TRUE,
  x_scale_zero_line = TRUE, x_scale_trans = "identity",
  x_scale_labels = waiver(), y_scale_zero = TRUE,
  y_scale_zero_line = TRUE, y_scale_trans = "identity",
  y_scale_labels = waiver(), facet_scales = "fixed",
  facet_nrow = NULL, title = "[Title]", subtitle = NULL,
  x_title = "[X title]", y_title = "[Y title]", caption = NULL,
  font_family = "Helvetica", font_size_title = NULL,
  font_size_body = NULL, wrap_title = 70, wrap_subtitle = 80,
  wrap_x_title = 50, wrap_y_title = 50, wrap_caption = 80,
  isMobile = FALSE)
```

Arguments

data	An ungrouped summarised tibble or dataframe. Required input.
x_var	Unquoted numeric variable to be on the x axis. Required input.
y_var	Unquoted numeric variable to be on the y axis. Required input.
facet_var	Unquoted categorical variable to facet the data by. Required input.
hover_var	Unquoted variable to be an additional hover variable for when used inside plotly::ggplotly(). Defaults to NULL.
size	Size of points. Defaults to 1.
pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette.
x_scale_zero	TRUE or FALSE whether the minimum of the x scale is zero. Defaults to TRUE.
x_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
x_scale_trans	A string specifying a transformation for the x scale. Defaults to "identity".

x_scale_labels	Argument to adjust the format of the x scale labels.
y_scale_zero	TRUE or FALSE whether the minimum of the y scale is zero. Defaults to TRUE.
y_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
y_scale_trans	A string specifying a transformation for the y scale. Defaults to "identity".
y_scale_labels	Argument to adjust the format of the y scale labels.
facet_scales	Whether facet_scales should be "fixed" across facets, "free" in both directions, or free in just one direction (i.e. "free_x" or "free_y"). Defaults to "fixed".
facet_nrow	The number of rows of facetted plots. Defaults to NULL, which generally chooses 2 rows. Not applicable to where isMobile is TRUE.
title	Title string. Defaults to "[Title]".
subtitle	Subtitle string. Defaults to "[Subtitle]".
x_title	X axis title string. Defaults to "[X title]".
y_title	Y axis title string. Defaults to "[Y title]".
caption	Caption title string. Defaults to NULL.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_x_title	Number of characters to wrap the x title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_y_title	Number of characters to wrap the y title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile.

Value

A ggplot object.

Examples

```
plot_data <- dplyr::sample_frac(ggplot2::diamonds, 0.05)

plot <- ggplot_scatter_facet(data = plot_data, x_var = carat, y_var = price, facet_var = color)
```

```
plot

plotly::ggplotly(plot, tooltip = "text")
```

---

ggplot_sf *Map of simple features in ggplot.*

Description

Map of simple features in ggplot that is not coloured and not facetted.

Usage

```
ggplot_sf(data, size = 0.5, alpha = 0.1, pal = NULL,
  coastline = NULL, title = "[Title]", subtitle = NULL,
  caption = NULL, font_family = "Helvetica", font_size_title = NULL,
  font_size_body = NULL, wrap_title = 70, wrap_subtitle = 80,
  wrap_caption = 80, isMobile = FALSE)
```

Arguments

data	A sf object with defined coordinate reference system. Required input.
size	Size of points. Defaults to 0.5.
alpha	The alpha of the fill. Defaults to 0.1. Only applicable to polygons.
pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette.
coastline	Add a sf object as a coastline (or administrative boundaries). Defaults to NULL. Use nz (or nz_region) to add a new zealand coastline. Or add a custom sf object.
title	Title string. Defaults to "[Title]".
subtitle	Subtitle string. Defaults to "[Subtitle]".
caption	Caption title string. Defaults to NULL.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shiny app, use input$isMobile if your app is able to retreive this input. A method to do this is described at https://g3rv4.com/2017/08/shiny-detect-mobile-browsers

Value

A ggplot object.

Examples

```
map_data <- example_sf_nz_river_wq %>%
  dplyr::filter(period == "1998-2017", indicator == "Nitrate-nitrogen")

ggplot_sf(data = map_data, coastline = nz)
```

---

ggplot_sf_col *Map of simple features in ggplot that is coloured.*

Description

Map of simple features in ggplot that is coloured, but not facetted.

Usage

```
ggplot_sf_col(data, col_var, col_method = NULL, bin_cuts = NULL,
  quantile_cuts = c(0, 0.25, 0.5, 0.75, 1), size = 0.5, alpha = 0.9,
  pal = NULL, rev_pal = FALSE, col_scale_drop = FALSE,
  remove_na = FALSE, coastline = NULL, coastline_behind = TRUE,
  coastline_pal = "#7f7f7f", legend_ncol = 3, legend_digits = 1,
  title = "[Title]", subtitle = NULL, col_title = "",
  caption = NULL, legend_labels = NULL, font_family = "Helvetica",
  font_size_title = NULL, font_size_body = NULL, wrap_title = 70,
  wrap_subtitle = 80, wrap_col_title = 25, wrap_caption = 80,
  isMobile = FALSE)
```

Arguments

data	A sf object with defined coordinate reference system. Required input.
col_var	Unquoted variable for points to be coloured by. Required input.
col_method	The method of colouring features, either "bin", "quantile" or "category." NULL results in "category", if categorical or "quantile" if numeric col_var. Note all numeric variables are cut to be inclusive of the min in the range, and exclusive of the max in the range (except for the final bucket which includes the highest value).
bin_cuts	A vector of bin cuts applicable where col_method of "bin" is selected. The first number in the vector should be either -Inf or 0, and the final number Inf. If NULL, 'pretty' breaks are used.
quantile_cuts	A vector of probability cuts applicable where col_method of "quantile" is selected. The first number in the vector should 0 and the final number 1. Defaults to quartiles. Only applicable where col_method equals "quantile".
size	Size of points. Defaults to 0.5.

alpha	The opacity of polygons. Defaults to 0.9.
pal	Character vector of hex codes. Defaults to NULL, which selects the colorbrewer Set1 or viridis.
rev_pal	Reverses the palette. Defaults to FALSE.
col_scale_drop	TRUE or FALSE of whether to drop unused levels from the legend. Defaults to FALSE.
remove_na	TRUE or FALSE of whether to remove NAs of the colour variable. Defaults to FALSE.
coastline	Add a sf object as a coastline (or administrative boundaries). Defaults to NULL. Use nz (or nz_region) to add a new zealand coastline. Or add a custom sf object.
coastline_behind	TRUE or FALSE as to whether the coastline is to be behind the sf object defined in the data argument. Defaults to FALSE.
coastline_pal	Colour of the coastline. Defaults to "#7F7F7F".
legend_ncol	The number of columns in the legend.
legend_digits	Select the appropriate number of decimal places for numeric variable auto legend labels. Defaults to 1.
title	Title string. Defaults to "[Title]".
subtitle	Subtitle string. Defaults to "[Subtitle]".
col_title	Colour title string for the legend. Defaults to NULL.
caption	Caption title string. Defaults to NULL.
legend_labels	A vector of manual legend label values. Defaults to NULL, which results in automatic labels.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_col_title	Number of characters to wrap the colour title to. Defaults to 25. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shiny app, use input$isMobile if your app is able to retreive this input. A method to do this is described at https://g3rv4.com/2017/08/shiny-detect-mobile-browsers

Value

A ggplot object.

Examples

```
ggplot_sf_col(data = example_sf_nz_livestock, col_var = dairydens, coastline = nz,
     col_method = "bin", bin_cuts = c(0, 10, 50, 100, 150, 200, Inf), legend_digits = 0,
     title = "Dairy density in count per km\u00b2, 2017")

ggplot_sf_col(data = example_sf_nz_livestock, col_var = dairydens, coastline = nz,
     col_method = "quantile", quantile_cuts = c(0, 0.25, 0.5, 0.75, 0.95, 1),
     title = "Dairy density in count per km\u00b2, 2017")

map_data <- example_sf_nz_river_wq %>%
  dplyr::filter(period == "1998-2017", indicator == "Nitrate-nitrogen")

 pal <- c("#4575B4", "#D3D3D3", "#D73027")

ggplot_sf_col(data = map_data, col_var = trend_category, coastline = nz,
   pal = pal, col_method = "category",
   title = "Monitored river nitrate-nitrogen trends, 2008-17")
```

---

ggplot_sf_col_facet *Map of simple features in ggplot that is coloured and facetted.*

Description

Map of simple features in ggplot that is coloured and facetted.

Usage

```
ggplot_sf_col_facet(data, col_var, facet_var, col_method = NULL,
  bin_cuts = NULL, quantile_cuts = c(0, 0.25, 0.5, 0.75, 1),
  quantile_by_facet = TRUE, size = 0.5, alpha = 0.9, pal = NULL,
  rev_pal = FALSE, col_scale_drop = FALSE, remove_na = FALSE,
  facet_nrow = NULL, legend_ncol = 3, legend_digits = 1,
  coastline = NULL, coastline_behind = TRUE,
  coastline_pal = "#7f7f7f", title = "[Title]", subtitle = NULL,
  col_title = "", caption = NULL, legend_labels = NULL,
  font_family = "Helvetica", font_size_title = NULL,
  font_size_body = NULL, wrap_title = 70, wrap_subtitle = 80,
  wrap_col_title = 25, wrap_caption = 80, isMobile = FALSE)
```

Arguments

data	A sf object with defined coordinate reference system. Required input.
col_var	Unquoted variable for points to be coloured by. Required input.
facet_var	Unquoted categorical variable to facet the data by. Required input.
col_method	The method of colouring features, either "bin", "quantile" or "category." NULL results in "category", if categorical or "quantile" if numeric col_var. Note all numeric variables are cut to be inclusive of the min in the range, and exclusive

	of the max in the range (except for the final bucket which includes the highest value).
bin_cuts	A vector of bin cuts applicable where col_method of "bin" is selected. The first number in the vector should be either -Inf or 0, and the final number Inf. If NULL, 'pretty' breaks are used.
quantile_cuts	A vector of probability cuts applicable where col_method of "quantile" is selected. The first number in the vector should 0 and the final number 1. Defaults to quartiles. Only applicable where col_method equals "quantile".
quantile_by_facet	TRUE of FALSE whether quantiles should be calculated for each group of the facet variable. Defaults to TRUE.
size	Size of points. Defaults to 0.5.
alpha	The opacity of polygons. Defaults to 0.9.
pal	Character vector of hex codes. Defaults to NULL, which selects the colorbrewer Set1 or viridis.
rev_pal	Reverses the palette. Defaults to FALSE.
col_scale_drop	TRUE or FALSE of whether to drop unused levels from the legend. Defaults to FALSE.
remove_na	TRUE or FALSE of whether to remove NAs of the colour variable. Defaults to FALSE.
facet_nrow	The number of rows of facetted plots. Not applicable to where isMobile is TRUE.
legend_ncol	The number of columns in the legend.
legend_digits	Select the appropriate number of decimal places for numeric variable auto legend labels. Defaults to 1.
coastline	Add a sf object as a coastline (or administrative boundaries). Defaults to NULL. Use nz (or nz_region) to add a new zealand coastline. Or add a custom sf object.
coastline_behind	TRUE or FALSE as to whether the coastline is to be behind the sf object defined in the data argument. Defaults to FALSE.
coastline_pal	Colour of the coastline. Defaults to "#7F7F7F".
title	Title string. Defaults to "[Title]".
subtitle	Subtitle string. Defaults to "[Subtitle]".
col_title	Colour title string for the legend. Defaults to NULL.
caption	Caption title string. Defaults to NULL.
legend_labels	A vector of manual legend label values. Defaults to NULL, which results in automatic labels.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.

wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_col_title	Number of characters to wrap the colour title to. Defaults to 25. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shiny app, use input$isMobile if your app is able to retreive this input. A method to do this is described at https://g3rv4.com/2017/08/shiny-detect-mobile-browsers

Value

A ggplot object.

Examples

```
map_data <- example_sf_nz_river_wq %>%
 dplyr::filter(period == "1998-2017",
 indicator %in% c("Nitrate-nitrogen", "Dissolved reactive phosphorus"))

 pal <- c("#4575B4", "#D3D3D3", "#D73027")

ggplot_sf_col_facet(data = map_data, col_var = trend_category, facet_var = indicator,
 coastline = nz, pal = pal,
 title = "Monitored river nitrate-nitrogen trends, 2008-17")
```

---

ggplot_sf_facet *Map of simple features in ggplot that is facetted.*

Description

Map of simple features in ggplot that is facetted, but not coloured.

Usage

```
ggplot_sf_facet(data, facet_var, size = 0.5, alpha = 0.1, pal = NULL,
  facet_nrow = NULL, coastline = NULL, coastline_behind = TRUE,
  coastline_pal = "#7f7f7f", title = "[Title]", subtitle = NULL,
  caption = NULL, font_family = "Helvetica", font_size_title = NULL,
  font_size_body = NULL, wrap_title = 70, wrap_subtitle = 80,
  wrap_caption = 80, isMobile = FALSE)
```

Arguments

data	A sf object with defined coordinate reference system. Required input.
facet_var	Unquoted categorical variable to facet the data by. Required input.
size	Size of points. Defaults to 0.5.
alpha	The alpha of the fill. Defaults to 0.1. Only applicable to polygons.
pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette.
facet_nrow	The number of rows of facetted plots. Not applicable to where isMobile is TRUE.
coastline	Add a sf object as a coastline (or administrative boundaries). Defaults to NULL. Use nz (or nz_region) to add a new zealand coastline. Or add a custom sf object.
coastline_behind	TRUE or FALSE as to whether the coastline is to be behind the sf object defined in the data argument. Defaults to FALSE.
coastline_pal	Colour of the coastline. Defaults to "#7F7F7F".
title	Title string. Defaults to "[Title]".
subtitle	Subtitle string. Defaults to "[Subtitle]".
caption	Caption title string. Defaults to NULL.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shiny app, use input$isMobile if your app is able to retreive this input. A method to do this is described at https://g3rv4.com/2017/08/shiny-detect-mobile-browsers

Value

A ggplot object.

Examples

```
map_data <- example_sf_nz_river_wq %>%
 dplyr::filter(period == "1998-2017", indicator == "Nitrate-nitrogen")

ggplot_sf_facet(data = map_data, facet_var = trend_category, coastline = nz,
  title = "Monitored river nitrate-nitrogen trends, 2008-17")
```

ggplot_stars *Map of an array in ggplot.*

Description

Map of an array in ggplot that is not coloured and not facetted.

Usage

```
ggplot_stars(data, pal = NULL, coastline = NULL,
  coastline_behind = FALSE, coastline_pal = "black",
  title = "[Title]", subtitle = NULL, caption = NULL,
  font_family = "Helvetica", font_size_title = NULL,
  font_size_body = NULL, wrap_title = 70, wrap_subtitle = 80,
  wrap_caption = 80, isMobile = FALSE)
```

Arguments

data	A stars object with 2 dimensions x and y. Required input.
pal	Character vector of hex codes, or provided objects with pal_ prefixes.
coastline	Add a sf object as a coastline (or administrative boundaries). Defaults to NULL. Use nz (or nz_region) to add a new zealand coastline. Or add a custom sf object.
coastline_behind	TRUE or FALSE as to whether the coastline is to be behind the stars object defined in the data argument. Defaults to FALSE.
coastline_pal	Colour of the coastline. Defaults to "#7F7F7F".
title	Title string. Defaults to "[Title]".
subtitle	Subtitle string. Defaults to "[Subtitle]".
caption	Caption title string. Defaults to NULL.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile. TRUEhis enable mobile compatible apps, where apps have ui mobileDetect function defined and mobile.js file in www/js/ folder https://g3rv4.com/2017/08/shiny-detect-mobile-browsers

Value

A ggplot object.

Examples

```
ggplot_stars(data = example_stars_nz_no3n, coastline = nz)
```

`ggplot_stars_col` *Map of an array in ggplot that is coloured.*

Description

Map of an array in ggplot that is coloured, but not facetted.

Usage

```
ggplot_stars_col(data, col_method = "quantile", quantile_cuts = c(0,
  0.25, 0.5, 0.75, 1), bin_cuts = NULL, pal = NULL, rev_pal = FALSE,
  coastline = NULL, coastline_behind = TRUE,
  coastline_pal = "#7f7f7f", legend_ncol = 3, legend_digits = 1,
  title = "[Title]", subtitle = NULL, col_title = "",
  caption = NULL, legend_labels = NULL, font_family = "Helvetica",
  font_size_title = NULL, font_size_body = NULL, wrap_title = 70,
  wrap_subtitle = 80, wrap_col_title = 25, wrap_caption = 80,
  isMobile = FALSE)
```

Arguments

`data`	A stars object with 2 dimensions x and y, and 1 attribute layer that will be coloured. Required input.
`col_method`	The method of colouring grid, either "bin", "quantile" or "category." Defaults to "quantile".
`quantile_cuts`	A vector of probability cuts applicable where col_method of "quantile" is selected. The first number in the vector should 0 and the final number 1. Defaults to quartiles. Only applicable where col_method equals "quantile".
`bin_cuts`	A vector of bin cuts applicable where col_method of "bin" is selected. The first number in the vector should be either -Inf or 0, and the final number Inf. If NULL, 'pretty' breaks are used. Only applicable where col_method equals "bin".
`pal`	Character vector of hex codes, or provided objects with pal_ prefixes. Defaults to viridis.
`rev_pal`	Reverses the palette. Defaults to FALSE.
`coastline`	Add a sf object as a coastline (or administrative boundaries). Defaults to NULL. Use nz (or nz_region) to add a new zealand coastline. Or add a custom sf object.

coastline_behind
: TRUE or FALSE as to whether the coastline is to be behind the stars object defined in the data argument. Defaults to FALSE.

coastline_pal
: Colour of the coastline. Defaults to "#7F7F7F".

legend_ncol
: The number of columns in the legend.

legend_digits
: Select the appropriate number of decimal places for numeric variable auto legend labels. Defaults to 1.

title
: Title string. Defaults to "[Title]".

subtitle
: Subtitle string. Defaults to "[Subtitle]".

col_title
: Colour title string for the legend. Defaults to NULL.

caption
: Caption title string. Defaults to NULL.

legend_labels
: A vector of manual legend label values. Defaults to NULL, which results in automatic labels.

font_family
: Font family to use. Defaults to "Helvetica".

font_size_title
: Font size for the title text. Defaults to 11.

font_size_body
: Font size for all text other than the title. Defaults to 10.

wrap_title
: Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.

wrap_subtitle
: Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.

wrap_col_title
: Number of characters to wrap the colour title to. Defaults to 25. Not applicable where isMobile equals TRUE.

wrap_caption
: Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.

isMobile
: Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile. TRUEhis enable mobile compatible apps, where apps have ui mobileDetect function defined and mobile.js file in www/js/ folder https://g3rv4.com/2017/08/shiny-detect-mobile-browsers

Value

A ggplot object.

Examples

```
ggplot_stars_col(data = example_stars_nz_no3n, coastline = nz,
   col_method = "quantile", quantile_cuts = c(0, 0.05, 0.25, 0.5, 0.75, 0.95, 1),
   title = "River modelled median nitrate-nitrogen concentrations, 2013-17")
```

`ggplot_stars_col_facet` *Map of an array in ggplot that is coloured and facetted.*

Description

Map of an array in ggplot that is coloured and facetted.

Usage

```
ggplot_stars_col_facet(data, col_method = "quantile",
  quantile_cuts = c(0, 0.25, 0.5, 0.75, 1), quantile_by_facet = TRUE,
  bin_cuts = NULL, pal = NULL, rev_pal = FALSE, coastline = NULL,
  coastline_behind = TRUE, coastline_pal = "#7f7f7f",
  facet_nrow = NULL, legend_ncol = 3, legend_digits = 1,
  title = "[Title]", subtitle = NULL, col_title = "",
  caption = NULL, legend_labels = NULL, font_family = "Helvetica",
  font_size_title = NULL, font_size_body = NULL, wrap_title = 70,
  wrap_subtitle = 80, wrap_col_title = 25, wrap_caption = 80,
  isMobile = FALSE)
```

Arguments

`data`	A stars object with 2 dimensions, x and y, and multiple named attribute layers with usual convention of lower case and underscores. Each attribute layer will be a facet. Required input.
`col_method`	The method of colouring features, either "bin", "quantile" or "category." Defaults to "quantile". Note all numeric variables are cut to be inclusive of the min in the range, and exclusive of the max in the range (except for the final bucket which includes the highest value).
`quantile_cuts`	A vector of probability cuts applicable where col_method of "quantile" is selected. The first number in the vector should 0 and the final number 1. Defaults to quartiles. Only applicable where col_method equals "quantile".
`quantile_by_facet`	TRUE of FALSE whether quantiles should be calculated for each group of the facet variable. Defaults to TRUE.
`bin_cuts`	A vector of bin cuts applicable where col_method of "bin" is selected. The first number in the vector should be either -Inf or 0, and the final number Inf. If NULL, 'pretty' breaks are used. Only applicable where col_method equals "bin".
`pal`	Character vector of hex codes, or provided objects with pal_ prefixes. Defaults to viridis.
`rev_pal`	Reverses the palette. Defaults to FALSE.
`coastline`	Add a sf object as a coastline (or administrative boundaries). Defaults to NULL. Use nz (or nz_region) to add a new zealand coastline. Or add a custom sf object.

coastline_behind
: TRUE or FALSE as to whether the coastline is to be behind the stars object defined in the data argument. Defaults to FALSE.

coastline_pal
: Colour of the coastline. Defaults to "#7F7F7F".

facet_nrow
: The number of rows of facetted plots. Not applicable to where isMobile is TRUE.

legend_ncol
: The number of columns in the legend.

legend_digits
: Select the appropriate number of decimal places for numeric variable auto legend labels. Defaults to 1.

title
: Title string. Defaults to "[Title]".

subtitle
: Subtitle string. Defaults to "[Subtitle]".

col_title
: Colour title string for the legend. Defaults to NULL.

caption
: Caption title string. Defaults to NULL.

legend_labels
: A vector of manual legend label values. Defaults to NULL, which results in automatic labels.

font_family
: Font family to use. Defaults to "Helvetica".

font_size_title
: Font size for the title text. Defaults to 11.

font_size_body
: Font size for all text other than the title. Defaults to 10.

wrap_title
: Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.

wrap_subtitle
: Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.

wrap_col_title
: Number of characters to wrap the colour title to. Defaults to 25. Not applicable where isMobile equals TRUE.

wrap_caption
: Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.

isMobile
: Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile. TRUEhis enable mobile compatible apps, where apps have ui mobileDetect function defined and mobile.js file in www/js/ folder https://g3rv4.com/2017/08/shiny-detect-mobile-browsers

Value

A ggplot object.

Examples

```
map_data1 <- example_stars_nz_no3n %>%
  rlang::set_names("Nitrate nitrogen")

map_data2 <- example_stars_nz_drp %>%
  rlang::set_names("Dissolved reactive phosphorus")
```

```
map_data <- c(map_data1, map_data2)

ggplot_stars_col_facet(data = map_data, coastline = nz,
   col_method = "quantile", quantile_cuts = c(0, 0.05, 0.25, 0.5, 0.75, 0.95, 1),
   title = "River modelled nutrient concentrations, 2013-17")
```

`ggplot_stars_facet` *Map of an array in ggplot that is facetted.*

Description

Map of an array in ggplot that is facetted, but not coloured.

Usage

```
ggplot_stars_facet(data, pal = NULL, coastline = NULL,
  coastline_behind = FALSE, coastline_pal = "black",
  facet_nrow = NULL, title = "[Title]", subtitle = NULL,
  caption = NULL, font_family = "Helvetica", font_size_title = NULL,
  font_size_body = NULL, wrap_title = 70, wrap_subtitle = 80,
  wrap_caption = 80, isMobile = FALSE)
```

Arguments

`data`	A stars object with 2 dimensions, x and y, and multiple named attribute layers with usual convention of lower case and underscores. These attribute layers will be facetted. Required input.
`pal`	Character vector of hex codes, or provided objects with pal_ prefixes.
`coastline`	Add a sf object as a coastline (or administrative boundaries). Defaults to NULL. Use nz (or nz_region) to add a new zealand coastline. Or add a custom sf object.
`coastline_behind`	TRUE or FALSE as to whether the coastline is to be behind the stars object defined in the data argument. Defaults to FALSE.
`coastline_pal`	Colour of the coastline. Defaults to "#7F7F7F".
`facet_nrow`	The number of rows of facetted plots. Not applicable to where isMobile is TRUE.
`title`	Title string. Defaults to "[Title]".
`subtitle`	Subtitle string. Defaults to "[Subtitle]".
`caption`	Caption title string. Defaults to NULL.
`font_family`	Font family to use. Defaults to "Helvetica".
`font_size_title`	Font size for the title text. Defaults to 11.
`font_size_body`	Font size for all text other than the title. Defaults to 10.

wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile. TRUEhis enable mobile compatible apps, where apps have ui mobileDetect function defined and mobile.js file in www/js/ folder https://g3rv4.com/2017/08/shiny-detect-mobile-browsers

Value

A ggplot object.

Examples

```
map_data1 <- example_stars_nz_no3n %>%
  rlang::set_names("nitrate_nitrogen")

map_data2 <- example_stars_nz_drp %>%
  rlang::set_names("dissolved_reactive_phosphorus")

map_data <- c(map_data1, map_data2)

ggplot_stars_facet(data = map_data, coastline = nz)
```

---

ggplot_vbar *Vertical bar ggplot.*

Description

Vertical bar ggplot that is not coloured and not facetted.

Usage

```
ggplot_vbar(data, x_var, y_var, hover_var = NULL,
  x_scale_labels = waiver(), y_scale_zero = TRUE,
  y_scale_zero_line = TRUE, y_scale_trans = "identity",
  y_scale_labels = waiver(), pal = NULL, width = 0.75,
  na_grey = FALSE, na_grey_hover_value = "NA", title = "[Title]",
  subtitle = NULL, x_title = "[X title]", y_title = "[Y title]",
  caption = NULL, font_family = "Helvetica", font_size_title = NULL,
  font_size_body = NULL, wrap_title = 70, wrap_subtitle = 80,
  wrap_x_title = 50, wrap_y_title = 50, wrap_caption = 80,
  isMobile = FALSE)
```

Arguments

data	A tibble or dataframe. Required input.
x_var	Unquoted numeric, date or categorical variable to be on the x axis. Required input.
y_var	Unquoted numeric variable to be on the y axis. Required input.
hover_var	Unquoted variable to be an additional hover variable for when used inside plotly::ggplotly(). Defaults to NULL.
x_scale_labels	Argument to adjust the format of the x scale labels.
y_scale_zero	TRUE or FALSE of whether the minimum of the y scale is zero. Defaults to TRUE.
y_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
y_scale_trans	A string specifying a transformation for the y axis scale, such as "log10" or "sqrt". Defaults to "identity".
y_scale_labels	Argument to adjust the format of the y scale labels.
pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette.
width	Width of bars. Defaults to 0.75.
na_grey	TRUE or FALSE of whether to provide wide grey bars for NA y_var values. Defaults to FALSE.
na_grey_hover_value	Value to provide to users in the hover for any NA grey bars. Defaults to "NA".
title	Title string. Defaults to [Title].
subtitle	Subtitle string. Defaults to [Subtitle].
x_title	X axis title string. Defaults to [X title].
y_title	Y axis title string. Defaults to [Y title].
caption	Caption title string. Defaults to NULL.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_x_title	Number of characters to wrap the x title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_y_title	Number of characters to wrap the y title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile.

Value

A ggplot object.

Examples

```
plot_data <- dplyr::storms %>%
  dplyr::group_by(year) %>%
  dplyr::summarise(average_wind = round(mean(wind), 2))

plot <- ggplot_vbar(data = plot_data, x_var = year, y_var = average_wind,
      title = "Average wind speed of Atlantic storms, 1975-2015",
      x_title = "Year",
      y_title = "Average maximum sustained wind speed (knots)")

plot

plotly::ggplotly(plot, tooltip = "text")
```

---

ggplot_vbar_col *Vertical bar ggplot that is coloured.*

Description

Vertical bar ggplot that is coloured, but not facetted.

Usage

```
ggplot_vbar_col(data, x_var, y_var, col_var, hover_var = NULL,
  x_scale_labels = waiver(), y_scale_zero = TRUE,
  y_scale_zero_line = TRUE, y_scale_trans = "identity",
  y_scale_labels = waiver(), col_scale_drop = FALSE,
  position = "stack", pal = NULL, legend_ncol = 3, width = 0.75,
  title = "[Title]", subtitle = NULL, x_title = "[X title]",
  y_title = "[Y title]", col_title = "", caption = NULL,
  legend_labels = NULL, font_family = "Helvetica",
  font_size_title = NULL, font_size_body = NULL, wrap_title = 70,
  wrap_subtitle = 80, wrap_x_title = 50, wrap_y_title = 50,
  wrap_col_title = 25, wrap_caption = 80, isMobile = FALSE)
```

Arguments

data	A tibble or dataframe. Required input.
x_var	Unquoted numeric, date or categorical variable to be on the x axis. Required input.
y_var	Unquoted numeric variable to be on the y axis. Required input.
col_var	Unquoted categorical variable to colour the bars. Required input.

hover_var	Unquoted variable to be an additional hover variable for when used inside plotly::ggplotly(). Defaults to NULL.
x_scale_labels	Argument to adjust the format of the x scale labels.
y_scale_zero	TRUE or FALSE of whether the minimum of the y scale is zero. Defaults to TRUE.
y_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
y_scale_trans	A string specifying a transformation for the y axis scale, such as "log10" or "sqrt". Defaults to "identity".
y_scale_labels	Argument to adjust the format of the y scale labels.
col_scale_drop	TRUE or FALSE of whether to drop unused levels from the legend. Defaults to FALSE.
position	Whether bars are positioned by "stack" or "dodge". Defaults to "stack".
pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette.
legend_ncol	The number of columns in the legend.
width	Width of bars. Defaults to 0.75.
title	Title string. Defaults to [Title].
subtitle	Subtitle string. Defaults to [Subtitle].
x_title	X axis title string. Defaults to [X title].
y_title	Y axis title string. Defaults to [Y title].
col_title	Colour title string for the legend. Defaults to NULL.
caption	Caption title string. Defaults to NULL.
legend_labels	A vector of manual legend label values. Defaults to NULL, which results in automatic labels.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_x_title	Number of characters to wrap the x title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_y_title	Number of characters to wrap the y title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_col_title	Number of characters to wrap the colour title to. Defaults to 25. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile.

Value

A ggplot object.

Examples

```
plot_data <- dplyr::storms %>%
  dplyr::mutate(status = stringr::str_to_sentence(status)) %>%
  dplyr::group_by(year, status) %>%
  dplyr::summarise(average_wind = round(mean(wind), 2))

plot <- ggplot_vbar_col(data = plot_data, x_var = year, y_var = average_wind, col_var = status)

plot

plotly::ggplotly(plot, tooltip = "text")
```

---

ggplot_vbar_col_facet *Vertical bar ggplot that is coloured and facetted.*

Description

Vertical bar ggplot that is coloured and facetted.

Usage

```
ggplot_vbar_col_facet(data, x_var, y_var, col_var, facet_var,
  hover_var = NULL, x_scale_labels = waiver(), y_scale_zero = TRUE,
  y_scale_zero_line = TRUE, y_scale_trans = "identity",
  y_scale_labels = waiver(), col_scale_drop = FALSE,
  position = "stack", facet_scales = "fixed", facet_nrow = NULL,
  pal = NULL, legend_ncol = 3, width = 0.75, title = "[Title]",
  subtitle = NULL, x_title = "[X title]", y_title = "[Y title]",
  col_title = "", caption = NULL, legend_labels = NULL,
  font_family = "Helvetica", font_size_title = NULL,
  font_size_body = NULL, wrap_title = 70, wrap_subtitle = 80,
  wrap_x_title = 50, wrap_y_title = 50, wrap_col_title = 25,
  wrap_caption = 80, isMobile = FALSE)
```

Arguments

data	A tibble or dataframe. Required input.
x_var	Unquoted numeric, date or categorical variable to be on the x axis. Required input.
y_var	Unquoted numeric variable to be on the y axis. Required input.
col_var	Unquoted categorical variable to colour the bars. Required input.
facet_var	Unquoted categorical variable to facet the data by. Required input.

hover_var	Unquoted variable to be an additional hover variable for when used inside plotly::ggplotly(). Defaults to NULL.
x_scale_labels	Argument to adjust the format of the x scale labels.
y_scale_zero	TRUE or FALSE of whether the minimum of the y scale is zero. Defaults to TRUE.
y_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
y_scale_trans	A string specifying a transformation for the y axis scale, such as "log10" or "sqrt". Defaults to "identity".
y_scale_labels	Argument to adjust the format of the y scale labels.
col_scale_drop	TRUE or FALSE of whether to drop unused levels from the legend. Defaults to FALSE.
position	Whether bars are positioned by "stack" or "dodge". Defaults to "stack".
facet_scales	Whether facet_scales should be "fixed" across facets, "free" in both directions, or free in just one direction (i.e. "free_x" or "free_y"). Defaults to "fixed".
facet_nrow	The number of rows of facetted plots. Defaults to NULL, which generally chooses 2 rows. Not applicable to where isMobile is TRUE.
pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette.
legend_ncol	The number of columns in the legend.
width	Width of bars. Defaults to 0.75.
title	Title string. Defaults to [Title].
subtitle	Subtitle string. Defaults to [Subtitle].
x_title	X axis title string. Defaults to [X title].
y_title	Y axis title string. Defaults to [Y title].
col_title	Colour title string for the legend. Defaults to NULL.
caption	Caption title string. Defaults to NULL.
legend_labels	A vector of manual legend label values. Defaults to NULL, which results in automatic labels.
font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.
wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_x_title	Number of characters to wrap the x title to. Defaults to 50. Not applicable where isMobile equals TRUE.

wrap_y_title	Number of characters to wrap the y title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_col_title	Number of characters to wrap the colour title to. Defaults to 25. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile.

Value

A ggplot object.

Examples

```
plot_data <- dplyr::storms %>%
  dplyr::mutate(status = stringr::str_to_sentence(status)) %>%
  dplyr::group_by(year, status, name) %>%
  dplyr::summarise(average_wind = round(mean(wind), 2)) %>%
  dplyr::filter(year %in% 1975:1980) %>%
  dplyr::filter(!(status == "Tropical storm" & year == 1980)) %>%
  dplyr::filter(name %in% c("Karl", "Juliet", "Jeanne", "Ivan", "Hermine",
  "Henri", "Gloria", "Georges", "Frederic"))

  plot <- ggplot_vbar_col_facet(data = plot_data, x_var = year, y_var = average_wind,
                                col_var = name, facet_var = status)

  plot

  plotly::ggplotly(plot, tooltip = "text")
```

---

ggplot_vbar_facet *Vertical bar ggplot that is facetted.*

Description

Vertical bar ggplot that is facetted, but not coloured.

Usage

```
ggplot_vbar_facet(data, x_var, y_var, facet_var, hover_var = NULL,
  x_scale_labels = waiver(), y_scale_zero = TRUE,
  y_scale_zero_line = TRUE, y_scale_trans = "identity",
  y_scale_labels = waiver(), facet_scales = "fixed",
  facet_nrow = NULL, pal = NULL, width = 0.75,
  na_grey_hover_value = "NA", na_grey = FALSE, title = "[Title]",
  subtitle = NULL, x_title = "[X title]", y_title = "[Y title]",
  caption = NULL, font_family = "Helvetica", font_size_title = NULL,
```

```
  font_size_body = NULL, wrap_title = 70, wrap_subtitle = 80,
  wrap_x_title = 50, wrap_y_title = 50, wrap_caption = 80,
  isMobile = FALSE)
```

Arguments

data	A tibble or dataframe. Required input.
x_var	Unquoted numeric, date or categorical variable to be on the x axis. Required input.
y_var	Unquoted numeric variable to be on the y axis. Required input.
facet_var	Unquoted categorical variable to facet the data by. Required input.
hover_var	Unquoted variable to be an additional hover variable for when used inside plotly::ggplotly(). Defaults to NULL.
x_scale_labels	Argument to adjust the format of the x scale labels.
y_scale_zero	TRUE or FALSE of whether the minimum of the y scale is zero. Defaults to TRUE.
y_scale_zero_line	TRUE or FALSE whether to add a zero line in for when values are above and below zero. Defaults to TRUE.
y_scale_trans	A string specifying a transformation for the y axis scale, such as "log10" or "sqrt". Defaults to "identity".
y_scale_labels	Argument to adjust the format of the y scale labels.
facet_scales	Whether facet_scales should be "fixed" across facets, "free" in both directions, or free in just one direction (i.e. "free_x" or "free_y"). Defaults to "fixed".
facet_nrow	The number of rows of facetted plots. Defaults to NULL, which generally chooses 2 rows. Not applicable to where isMobile is TRUE.
pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette.
width	Width of bars. Defaults to 0.75.
na_grey_hover_value	Value to provide to users in the hover for any NA grey bars. Defaults to "NA".
na_grey	TRUE or FALSE of whether to provide wide grey bars for NA y_var values. Only works where facet_scales = "fixed" or "free_y". Defaults to FALSE.
title	Title string. Defaults to [Title].
subtitle	Subtitle string. Defaults to [Subtitle].
x_title	X axis title string. Defaults to [X title].
y_title	Y axis title string. Defaults to [Y title].
caption	Caption title string. Defaults to NULL.
font_family	Font family to use. Defaults NULL.
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.

wrap_title	Number of characters to wrap the title to. Defaults to 70. Not applicable where isMobile equals TRUE.
wrap_subtitle	Number of characters to wrap the subtitle to. Defaults to 80. Not applicable where isMobile equals TRUE.
wrap_x_title	Number of characters to wrap the x title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_y_title	Number of characters to wrap the y title to. Defaults to 50. Not applicable where isMobile equals TRUE.
wrap_caption	Number of characters to wrap the caption to. Defaults to 80. Not applicable where isMobile equals TRUE.
isMobile	Whether the plot is to be displayed on a mobile device. Defaults to FALSE. In a shinyapp, isMobile should be specified as input$isMobile.

Value

A ggplot object.

Examples

```
plot_data <- dplyr::storms %>%
  dplyr::mutate(status = stringr::str_to_sentence(status)) %>%
  dplyr::group_by(year, status) %>%
  dplyr::summarise(average_wind = round(mean(wind), 2))

plot <- ggplot_vbar_facet(data = plot_data, x_var = year, y_var = average_wind,
                          facet_var = status)

plot

plotly::ggplotly(plot, tooltip = "text")
```

---

leaflet_basemap_stack *Basemap stack in leaflet.*

Description

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

Usage

```
leaflet_basemap_stack(top_layer = "light")
```

Arguments

top_layer	The first layer to start in the basemap stack. Either "light", "dark", "street", "satellite", or "ocean". Defaults to "light".

Value

A leaflet object.

Examples

```
leaflet_basemap_stack("dark")
```

`leaflet_basemap_stack_nz` *Basemap stack in leaflet for New Zealand.*

Description

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

Usage

```
leaflet_basemap_stack_nz(top_layer = "light")
```

Arguments

`top_layer`	The first layer to start in the basemap stack. Either "light", "dark", "street", "satellite", or "ocean". Defaults to "light".

Value

A leaflet object.

Examples

```
leaflet_basemap_stack_nz("dark")
```

`leaflet_sf` *Map of simple features in leaflet.*

Description

Map of simple features in leaflet that is not coloured.

Usage

```
leaflet_sf(data, pal = NULL,
  popup = leafpop::popupTable(sentence_spaced_colnames(data)),
  radius = 1, weight = 2, opacity = 0.1, stroke = TRUE,
  title = "[Title]", legend_digits = 1, legend_labels = "[Feature]",
  shiny = FALSE, basemap = "light", map_id = "map")
```

Arguments

data	An sf object of geometry type point/multipoint, linestring/multilinestring or polygon/multipolygon geometry type. Required input.
pal	Character vector of hex codes. Defaults to NULL, which selects the Stats NZ palette.
popup	HTML strings for use in popup. Defaults to making a leafpop::popupTable of all attribute columns in the sf object.
radius	Radius of points. Defaults to 1.
weight	Stroke border size. Defaults to 2.
opacity	The opacity of the fill. Defaults to 0.1. Only applicable to polygons.
stroke	TRUE or FALSE of whether to draw a border around the features. Defaults to TRUE.
title	A title string that will be wrapped into the legend. Defaults to "Title"
legend_digits	Select the appropriate number of decimal places for numeric variable auto legend labels. Defaults to 1.
legend_labels	A vector of legend label values. Defaults to "Feature".
shiny	TRUE or FALSE for whether the map is being run within a shiny app. Defaults to FALSE.
basemap	The underlying basemap. Either "light", "dark", "satellite", "street", or "ocean". Defaults to "light". Only applicable where shiny equals FALSE.
map_id	The shiny map id for a leaflet map within a shiny app. For standard single-map apps, id "map" should be used. For dual-map apps, "map1" and "map2" should be used. Defaults to "map".

Value

A leaflet object.

Examples

```
map_data <- example_sf_nz_river_wq %>%
  dplyr::filter(period == "1998-2017", indicator == "Nitrate-nitrogen")

leaflet_sf(map_data)
```

---

leaflet_sf_col *Map of simple features in leaflet that is coloured.*

Description

Map of simple features in leaflet that is coloured.

Usage

```
leaflet_sf_col(data, col_var, label_var = NULL, col_method = NULL,
  bin_cuts = NULL, quantile_cuts = c(0, 0.25, 0.5, 0.75, 1),
  pal = NULL, rev_pal = FALSE, col_scale_drop = FALSE,
  popup = leafpop::popupTable(sentence_spaced_colnames(data)),
  radius = 1, weight = 2, opacity = 0.9, stroke = TRUE,
  title = "[Title]", legend_digits = 1, legend_labels = NULL,
  basemap = "light", shiny = FALSE, map_id = "map")
```

Arguments

data	An sf object of geometry type point/multipoint, linestring/multilinestring or polygon/multipolygon geometry type. Required input.
col_var	Unquoted variable to colour the features by. Required input.
label_var	Unquoted variable to label the features by. If NULL, defaults to using the colour variable.
col_method	The method of colouring features, either "bin", "quantile" or "category." if categorical colour variable, NULL results in "category". If numeric variable, defaults to "quantile". Note all numeric variables are cut to be inclusive of the min in the range, and exclusive of the max in the range (except for the final bucket which includes the highest value).
bin_cuts	A vector of bin cuts applicable where col_method of "bin" is selected. The first number in the vector should be either -Inf or 0, and the final number Inf. If NULL, 'pretty' breaks are used. Only applicable where col_method equals "bin".
quantile_cuts	A vector of probability cuts applicable where col_method of "quantile" is selected. The first number in the vector should 0 and the final number 1. Defaults to quartiles. Only applicable where col_method equals "quantile".
pal	Character vector of hex codes. Defaults to NULL, which selects the colorbrewer Set1 or viridis.
rev_pal	Reverses the palette. Defaults to FALSE.
col_scale_drop	TRUE or FALSE of whether to drop unused levels from the legend. Defaults to FALSE.
popup	HTML strings for use in popup. Defaults to making a leafpop::popupTable of all attribute columns in the sf object.
radius	Radius of points. Defaults to 1.
weight	Stroke border size. Defaults to 2.
opacity	The opacity of polygons. Defaults to 0.9.
stroke	TRUE or FALSE of whether to draw a border around the features. Defaults to TRUE.
title	A title string that will be wrapped into the legend. Defaults to "Title".
legend_digits	Select the appropriate number of decimal places for numeric variable auto legend labels. Defaults to 1.

legend_labels	A vector of manual legend label values. Defaults to NULL, which results in automatic labels.
basemap	The underlying basemap. Either "light", "dark", "satellite", "street", or "ocean". Defaults to "light". Only applicable where shiny equals FALSE.
shiny	TRUE or FALSE for whether the map is being run within a shiny app. Defaults to FALSE.
map_id	The shiny map id for a leaflet map within a shiny app. For standard single-map apps, id "map" should be used. For dual-map apps, "map1" and "map2" should be used. Defaults to "map".

Value

A leaflet object.

Examples

```
leaflet_sf_col(example_sf_nz_livestock, dairydens,
     col_method = "quantile", quantile_cuts = c(0, 0.25, 0.5, 0.75, 0.95, 1),
     title = "Dairy density in count per km\u00b2, 2017")

leaflet_sf_col(example_sf_nz_livestock, dairydens,
     col_method = "bin", bin_cuts = c(0, 10, 50, 100, 150, 200, Inf), legend_digits = 0,
     title = "Dairy density in count per km\u00b2, 2017")

map_data <- example_sf_nz_river_wq %>%
  dplyr::filter(period == "1998-2017", indicator == "Nitrate-nitrogen")

pal <- c("#4575B4", "#D3D3D3", "#D73027")

leaflet_sf_col(map_data, trend_category, pal = pal, col_method = "category",
   title = "Monitored river nitrate-nitrogen trends, 2008\u201317")
```

---

leaflet_stars *Map of an array in leaflet.*

Description

Map of an array in leaflet.

Usage

```
leaflet_stars(data, pal = NULL, opacity = 0.5, title = "[Title]",
  legend_digits = 1, legend_labels = "[Array]", basemap = "light",
  shiny = FALSE, map_id = "map")
```

Arguments

data	A stars object with dimensions x and y with crs in wgs84 (epsg4326). Required input.
pal	Character vector of hex codes, or provided objects with pal_ prefixes.
opacity	Sets the opacity of the grid cells. Defaults to 0.1.
title	A title string that will be wrapped into the legend. Defaults to "Title".
legend_digits	Select the appropriate number of decimal places for numeric variable auto legend labels. Defaults to 1.
legend_labels	A vector of legend label values. Defaults to "[Array]".
basemap	The underlying basemap. Either "light", "dark", "satellite", "street", or "ocean". Defaults to "light". Only applicable where shiny equals FALSE.
shiny	TRUE or FALSE for whether the map is being run within a shiny app. Defaults to FALSE.
map_id	This argument is only relevant for within apps. For single map shiny apps, the id "map" can be used. For dual map apps, "map1" and "map2" should be used. Defaults to "map".

Value

A leaflet object.

Examples

```
leaflet_stars(example_stars_nz_no3n)
```

---

leaflet_stars_col *Map of an array in leaflet that is coloured.*

Description

Map of an array in leaflet that is coloured.

Usage

```
leaflet_stars_col(data, col_method = "quantile", quantile_cuts = c(0,
  0.25, 0.5, 0.75, 1), bin_cuts = NULL, pal = NULL, rev_pal = FALSE,
  opacity = 1, legend_digits = 1, title = "[Title]",
  legend_labels = NULL, basemap = "light", shiny = FALSE,
  map_id = "map")
```

Arguments

data	A stars object with dimensions x and y, and 1 attribute layer with crs in wgs84 (epsg4326). Required input.
col_method	The method of colouring features, either "bin", "quantile" or "category." Defaults to "quantile". Note all numeric variables are cut to be inclusive of the min in the range, and exclusive of the max in the range (except for the final bucket which includes the highest value).
quantile_cuts	A vector of probability cuts applicable where col_method of "quantile" is selected. The first number in the vector should 0 and the final number 1. Defaults to quartiles. Only applicable where col_method equals "quantile".
bin_cuts	A vector of bin cuts applicable where col_method of "bin" is selected. The first number in the vector should be either -Inf or 0, and the final number Inf. If NULL, 'pretty' breaks are used. Only applicable where col_method equals "bin".
pal	Character vector of hex codes, or provided objects with pal_ prefixes. Defaults to viridis.
rev_pal	Reverses the palette. Defaults to FALSE.
opacity	Sets the opacity of the grid cells. Defaults to 0.9.
legend_digits	Select the appropriate number of decimal places for the auto legend. Defaults to 1.
title	A title string that will be wrapped into the legend. Defaults to "Title".
legend_labels	A vector of legend label values. Defaults to NULL, which results in automatic labels.
basemap	The underlying basemap. Either "light", "dark", "satellite", "street", or "ocean". Defaults to "light". Only applicable where shiny equals FALSE.
shiny	TRUE or FALSE for whether the map is being run within a shiny app. Defaults to FALSE.
map_id	This argument is only relevant for within apps. For single map shiny apps, the id "map" can be used. For dual map apps, "map1" and "map2" should be used. Defaults to "map".

Value

A leaflet object.

Examples

```
leaflet_stars_col(example_stars_nz_no3n,
   col_method = "quantile", quantile_cuts = c(0, 0.05, 0.25, 0.5, 0.75, 0.95, 1),
  title = "River modelled median nitrate-nitrogen concentrations in g/m\u00b3, 2013\u201317")
```

numeric_legend_labels *Numeric legend labels.*

Description

Pretty numeric legend labels.

Usage

```
numeric_legend_labels(bin_cuts, legend_digits = 1)
```

Arguments

bin_cuts	A numeric vector of bin cuts from which to create a vector of legend labels.
legend_digits	The number of digits to round the legend labels.

Value

A vector of labels.

nz *New Zealand coastline.*

Description

New Zealand coastline, excluding the Chathams, that is simplified for ggplot.

Usage

```
nz
```

Format

An sf object.

Source

https://data.linz.govt.nz/layer/51153-nz-coastlines-and-islands-polygons-topo-150k/

Examples

```
nz

ggplot_sf(nz)

ggplot_sf(dplyr::slice(nz, 2))

ggplot_sf(dplyr::slice(nz, 1, 3))
```

pal_ea19 *Colour palette for categorical variables.*

Description

Colour palette for categorical variables.

Usage

```
pal_ea19
```

Format

An object of class `character` of length 9.

Value

A vector of hex codes.

Examples

```
scales::show_col(pal_ea19)
```

pal_ea19_nof4 *Colour palette for 4 categories from good to bad*

Description

A colour palette used for depicting subcategories in the NZ conservation threat status.

Usage

```
pal_ea19_nof4
```

Format

An object of class `character` of length 4.

Value

A vector of hex codes.

Examples

```
scales::show_col(pal_ea19_nof4)
```

pal_ea19_nof5 *Colour palette for 5 categories from good to bad*

Description

A colour palette used for depicting subcategories in the NZ conservation threat status.

Usage

```
pal_ea19_nof5
```

Format

An object of class `character` of length 5.

Value

A vector of hex codes.

Examples

```
scales::show_col(pal_ea19_nof5)
```

pal_ea19_nztcs_c *Colour palette for the NZTCS.*

Description

A colour palette used for depicting categories in the NZ conservation threat status.

Usage

```
pal_ea19_nztcs_c
```

Format

An object of class `character` of length 4.

Value

A vector of hex codes.

Examples

```
scales::show_col(pal_ea19_nztcs_c)
```

pal_ea19_trend2 *Colour palette for a categorical trend variable with 2 values.*

Description

Colour palette for categorical variables.

Usage

```
pal_ea19_trend2
```

Format

An object of class `character` of length 2.

Value

A vector of hex codes.

Examples

```
scales::show_col(pal_ea19_trend2)
```

pal_ea19_trend3 *Colour palette for a categorical trend variable with 3 values.*

Description

Colour palette for categorical variables.

Usage

```
pal_ea19_trend3
```

Format

An object of class `character` of length 3.

Value

A vector of hex codes.

Examples

```
scales::show_col(pal_ea19_trend3)
```

pal_ea19_trend5 *Colour palette for a categorical trend variable with 5 values.*

Description

Colour palette for categorical variables.

Usage

```
pal_ea19_trend5
```

Format

An object of class `character` of length 5.

Value

A vector of hex codes.

Examples

```
scales::show_col(pal_ea19_trend5)
```

pal_point_set1 *Colour palette for categorical variables for points.*

Description

Colour palette for categorical variables.

Usage

```
pal_point_set1
```

Format

An object of class `character` of length 9.

Value

A vector of hex codes.

Examples

```
scales::show_col(pal_point_set1)
```

pal_point_trend2 *Colour palette for a categorical trend variable with 2 values for points.*

Description

Colour palette for categorical variables.

Usage

```
pal_point_trend2
```

Format

An object of class `character` of length 2.

Value

A vector of hex codes.

Examples

```
scales::show_col(pal_point_trend2)
```

pal_point_trend3 *Colour palette for a categorical trend variable with 3 values for points.*

Description

Colour palette for categorical variables.

Usage

```
pal_point_trend3
```

Format

An object of class `character` of length 3.

Value

A vector of hex codes.

Examples

```
scales::show_col(pal_point_trend3)
```

pal_point_trend5 *Colour palette for a categorical trend variable with 5 values for points.*

Description

Colour palette for categorical variables.

Usage

```
pal_point_trend5
```

Format

An object of class `character` of length 5.

Value

A vector of hex codes.

Examples

```
scales::show_col(pal_point_trend5)
```

pal_snz *Colour palette for categorical variables.*

Description

Colour palette for categorical variables.

Usage

```
pal_snz
```

Format

An object of class `character` of length 9.

Value

A vector of hex codes.

Examples

```
scales::show_col(pal_snz)
```

pal_snz_nof4 *Colour palette for 4 categories from good to bad*

Description

A colour palette used for depicting subcategories in the NZ conservation threat status.

Usage

```
pal_snz_nof4
```

Format

An object of class `character` of length 4.

Value

A vector of hex codes.

Examples

```
scales::show_col(pal_snz_nof4)
```

pal_snz_nof5 *Colour palette for 5 categories from good to bad*

Description

A colour palette used for depicting subcategories in the NZ conservation threat status.

Usage

```
pal_snz_nof5
```

Format

An object of class `character` of length 5.

Value

A vector of hex codes.

Examples

```
scales::show_col(pal_snz_nof5)
```

pal_snz_nztcs_c *Colour palette for the NZTCS.*

Description

A colour palette used for depicting categories in the NZ conservation threat status.

Usage

```
pal_snz_nztcs_c
```

Format

An object of class `character` of length 4.

Value

A vector of hex codes.

Examples

```
scales::show_col(pal_snz_nztcs_c)
```

pal_snz_nztcs_s *Colour palette for the NZTCS.*

Description

A colour palette used for depicting subcategories in the NZ conservation threat status.

Usage

```
pal_snz_nztcs_s
```

Format

An object of class `character` of length 9.

Value

A vector of hex codes.

Examples

```
scales::show_col(pal_snz_nztcs_s)
```

pal_snz_trend2 *Colour palette for a categorical trend variable with 2 values.*

Description

Colour palette for categorical variables.

Usage

```
pal_snz_trend2
```

Format

An object of class `character` of length 2.

Value

A vector of hex codes.

Examples

```
scales::show_col(pal_snz_trend2)
```

pal_snz_trend3 *Colour palette for a categorical trend variable with 3 values.*

Description

Colour palette for categorical variables.

Usage

```
pal_snz_trend3
```

Format

An object of class `character` of length 3.

Value

A vector of hex codes.

Examples

```
scales::show_col(pal_snz_trend3)
```

pal_snz_trend5 *Colour palette for a categorical trend variable with 5 values.*

Description

Colour palette for categorical variables.

Usage

```
pal_snz_trend5
```

Format

An object of class `character` of length 5.

Value

A vector of hex codes.

Examples

```
scales::show_col(pal_snz_trend5)
```

plotly_order_legend *Order plotly legend elements.*

Description

Order plotly legend elements.

Usage

```
plotly_order_legend(plotly, numeric_order = NULL)
```

Arguments

`plotly`	A plotly object.
`numeric_order`	A vector specifying the numeric order of elements. Required input.

Examples

```
plot_data <- ggplot2::diamonds %>%
   dplyr::mutate(cut = stringr::str_to_sentence(cut)) %>%
   dplyr::group_by(cut, clarity) %>%
   dplyr::summarise(average_price = mean(price)) %>%
   dplyr::mutate(average_price_thousands = round(average_price / 1000, 1)) %>%
   dplyr::ungroup()

plot <- ggplot_hbar_col(data = plot_data,
                        x_var = average_price_thousands,
                        y_var = cut,
                        col_var = clarity,
                        legend_ncol = 4,
                        title = "Average diamond price by cut and clarity",
                        x_title = "Average price ($US thousands)",
                        y_title = "Cut")

plotly::ggplotly(plot, tooltip = "text")

plotly::ggplotly(plot, tooltip = "text") %>%
   plotly_order_legend(c(4, 1:3, 5:8))
```

---

plotly_remove_buttons *Remove plotly buttons from the mode bar, other than the camera and plotly logo.*

Description

Remove plotly buttons from the mode bar, other than the camera and plotly logo.

Usage

```
plotly_remove_buttons(plotly, logo = FALSE)
```

Arguments

plotly	A plotly object.
logo	TRUE or FALSE of whether to display the plotly logo. Defaults to FALSE.

Examples

```
plot_data <- dplyr::sample_frac(ggplot2::diamonds, 0.05)

plot <- ggplot_scatter(data = plot_data, x_var = carat, y_var = price)

plotly::ggplotly(plot, tooltip = "text") %>%
   plotly_remove_buttons()
```

plotly_reverse_legend *Reverse plotly legend elements.*

Description

Reverse plotly legend elements.

Usage

```
plotly_reverse_legend(plotly)
```

Arguments

plotly	A plotly object.

Examples

```
plot_data <- ggplot2::diamonds %>%
   dplyr::mutate(cut = stringr::str_to_sentence(cut)) %>%
   dplyr::group_by(cut, clarity) %>%
   dplyr::summarise(average_price = mean(price)) %>%
   dplyr::mutate(average_price_thousands = round(average_price / 1000, 1)) %>%
   dplyr::ungroup()

plot <- ggplot_hbar_col(data = plot_data,
                        x_var = average_price_thousands,
                        y_var = cut,
                        col_var = clarity,
                        legend_ncol = 4,
                        title = "Average diamond price by cut and clarity",
                        x_title = "Average price ($US thousands)",
                        y_title = "Cut")

plotly::ggplotly(plot, tooltip = "text")

plotly::ggplotly(plot, tooltip = "text") %>%
   plotly_reverse_legend()
```

run_template *Run shiny template with option to download.*

Description

Run shiny template with option to download.

Usage

```
run_template(template = "template1", ...)
```

Arguments

template	template name. Available templates are "template1" for a graph and table, and "template2" and "template3" also providing maps. Defaults to "template1".
...	passed to shiny::runApp

---

sentence_spaced_colnames *Convert column names to sentence case.*

Description

A function to convert colnames to snakecase and then to sentence case to be used in functions for making hover values.

Usage

```
sentence_spaced_colnames(data)
```

Arguments

data	The number of digits to round the legend labels.

Value

A numeric value.

---

signed_sqrt_trans *Signed square root ggplot scale transformation.*

Description

A signed square root ggplot scale transformation.

Usage

```
signed_sqrt_trans()
```

Value

A ggplot scale transformation.

theme_box *Theme for vertical box ggplots.*

Description

Theme for vertical box ggplots.

Usage

```
theme_box(font_family = "Helvetica", font_size_title = 11,
  font_size_body = 10)
```

Arguments

font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.

Value

A ggplot theme.

Examples

```
ggplot2::ggplot() +
  theme_box("Courier", 9, 7) +
  ggplot2::ggtitle("This is a title of a selected font family and size")
```

theme_hbar *Theme for horizontal bar ggplots.*

Description

Theme for horizontal bar ggplots.

Usage

```
theme_hbar(font_family = "Helvetica", font_size_title = 11,
  font_size_body = 10)
```

Arguments

font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.

Value

A ggplot theme.

Examples

```
ggplot2::ggplot() +
  theme_hbar("Courier", 9, 7) +
  ggplot2::ggtitle("This is a title of a selected font family and size")
```

---

theme_line *Theme for line ggplots.*

Description

Theme for line ggplots.

Usage

```
theme_line(font_family = "Helvetica", font_size_title = 11,
  font_size_body = 10)
```

Arguments

font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.

Value

A ggplot theme.

Examples

```
ggplot2::ggplot() +
  theme_line("Courier", 9, 7) +
  ggplot2::ggtitle("This is a title of a selected font family and size")
```

theme_scatter *Theme for scatter ggplots.*

Description

Theme for scatter ggplots.

Usage

```
theme_scatter(font_family = "Helvetica", font_size_title = 11,
  font_size_body = 10)
```

Arguments

font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.

Value

A ggplot theme.

Examples

```
ggplot2::ggplot() +
  theme_scatter("Courier", 9, 7) +
  ggplot2::ggtitle("This is a title of a selected font family and size")
```

theme_sf *Theme for ggplot maps of simple features.*

Description

Theme for ggplot maps of simple features.

Usage

```
theme_sf(font_family = "Helvetica", font_size_title = 11,
  font_size_body = 10)
```

Arguments

font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.

Value

A ggplot theme.

Examples

```
ggplot2::ggplot() +
  theme_sf("Courier", 9, 7) +
  ggplot2::ggtitle("This is a title of a selected font family and size")
```

`theme_stars` *Theme for ggplot maps of arrays.*

Description

Theme for ggplot maps of arrays.

Usage

```
theme_stars(font_family = "Helvetica", font_size_title = 11,
  font_size_body = 10)
```

Arguments

`font_family`	Font family to use. Defaults to "Helvetica".
`font_size_title`	Font size for the title text. Defaults to 11.
`font_size_body`	Font size for all text other than the title. Defaults to 10.

Value

A ggplot theme.

Examples

```
ggplot2::ggplot() +
  theme_stars("Courier", 9, 7) +
  ggplot2::ggtitle("This is a title of a selected font family and size")
```

theme_vbar *Theme for vertical bar ggplots.*

Description

Theme for vertical bar ggplots.

Usage

```
theme_vbar(font_family = "Helvetica", font_size_title = 11,
  font_size_body = 10)
```

Arguments

font_family	Font family to use. Defaults to "Helvetica".
font_size_title	Font size for the title text. Defaults to 11.
font_size_body	Font size for all text other than the title. Defaults to 10.

Value

A ggplot theme.

Examples

```
ggplot2::ggplot() +
  theme_vbar("Courier", 9, 7) +
  ggplot2::ggtitle("This is a title of a selected font family and size")
```

Index