# Package 'ggrefine'

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**Title** Publication-Quality 'ggplot2' Themes

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---

`aes_colour_blend` *Blend fill into a derived colour mapping*

---

## Description

Note: this sets `colour`, not `fill` — `fill` is the value it reads from, `colour` is what it derives. Maps `colour` to a blended version of `fill`, evaluated after scale training via `ggplot2::after_scale()`. Attaches no scale itself — use `scale_colour_blend_discrete()` (or `_continuous`/`_binned`) for a ready-to-plot version that also scales `fill`. Requires the `ggrefine` function to be used instead of `ggplot2::ggplot` to work where no fill aesthetic is mapped.

## Usage

```
aes_colour_blend(blend = NULL)
```

## Arguments

| | |
|---|---|
| `blend` | A function that takes a colour vector and returns a blended colour vector. |

## Value

A `ggplot2` mapping object (as returned by `ggplot2::aes()`).

## aes_colour_contrast *Derive a legible colour by contrasting against fill*

### Description

Note: this sets `colour`, not `fill` — `fill` is the value it reads from, `colour` is what it derives. Maps `colour` to a dark or light shade chosen for contrast against the layer's `fill` aesthetic, evaluated after scale training via `ggplot2::after_scale()`. Attaches no scale itself — sits downstream of whatever `fill` scale you've already applied.

### Usage

```
aes_colour_contrast(dark = NULL, light = NULL, ...)
```

### Arguments

| | |
|---|---|
| `dark` | A dark colour string or hex value. If `NULL`, derived from the active theme. |
| `light` | A light colour string or hex value. If `NULL`, derived from the active theme. |
| `...` | Unused. Included to support trailing commas. |

### Value

A `ggplot2` mapping object (as returned by `ggplot2::aes()`).

## aes_colour_panel *Derive a legible colour by contrasting against the panel background*

### Description

Maps `colour` to a dark or light shade chosen for contrast against the active theme's panel (or plot) background fill, evaluated after scale training via `ggplot2::after_scale()`. Attaches no scale itself.

### Usage

```
aes_colour_panel(dark = NULL, light = NULL, ...)
```

### Arguments

| | |
|---|---|
| `dark` | A dark colour string or hex value. If `NULL`, derived from the active theme. |
| `light` | A light colour string or hex value. If `NULL`, derived from the active theme. |
| `...` | Unused. Included to support trailing commas. |

### Value

A `ggplot2` mapping object (as returned by `ggplot2::aes()`).

## aes_fill_blend *Blend colour into a derived fill mapping*

### Description

Note: this sets `fill`, not `colour` — `colour` is the value it reads from, `fill` is what it derives. Maps `fill` to a blended version of `colour`, evaluated after scale training via `ggplot2::after_scale()`. Attaches no scale itself — use `scale_fill_blend_discrete()` (or `_continuous`/`_binned`) for a ready-to-plot version that also scales `colour`.

### Usage

```
aes_fill_blend(blend = NULL)
```

### Arguments

| | |
|---|---|
| `blend` | A function that takes a colour vector and returns a blended colour vector. |

### Value

A `ggplot2` mapping object (as returned by `ggplot2::aes()`).

## ggrefine *Initialize a plot object with theme-aware default aesthetics*

### Description

`ggrefine()` initializes a plot object using a specified plotting function (defaults to `ggplot2::ggplot()`) and pre-populates default identity `fill` and `colour` aesthetic mappings derived from the active theme's `geom` defaults (falling back to `"grey35"` and `"black"` respectively).

These default aesthetics act as lightweight fallbacks and are cleanly overridden when explicit mappings are added in subsequent layers via `ggplot2::aes()`.

### Usage

```
ggrefine(data = NULL, initialise = ggplot2::ggplot)
```

### Arguments

| | |
|---|---|
| `data` | Default data frame or graph object to use for plot. If not specified, must be supplied in individual layers. |
| `initialise` | Function or lambda used to initialize the plot object (e.g., ggplot2::ggplot, `\(x) ggplot2::ggplot(x)`, or `\(x) ggraph::ggraph(x, layout = "kk")`). Defaults to `ggplot2::ggplot()`. |

## Value

A plot object initialized with default aesthetic mappings.

## Examples

```
library(ggplot2)
library(dplyr)

set_theme(ggrefine::theme_lights())

mpg |>
  count(class) |>
  ggrefine() +
  aes(x = class, y = n, fill = class) +
  geom_col() +
  scale_colour_blend_discrete()
```

---

`refine_axis_grid` *Refine plot axes and panel grid*

---

## Description

A single entry point over the `axis_mode` x `grid_mode` combinations previously exposed as sixteen separate `refine_*_*()` functions. Those functions still exist internally (e.g. `.refine_modern_drift()`) and do the actual work; this function just dispatches to the right one.

## Usage

```
refine_axis_grid(
  discrete = "none",
  orientation = NULL,
  ...,
  axis_mode = "modern",
  grid_mode = "flow"
)
```

## Arguments

| | |
|---|---|
| `discrete` | Character. Which axes should be treated as discrete for refinement purposes: `"none"`, `"x"`, `"y"`, or `"both"`. Default `"none"`. |
| `orientation` | Character. The primary axis of interest: `"x"` or `"y"`. Affects `grid_mode` values `"drift"` and `"flow"`. If `NULL` (default), it is inferred from `discrete`: `"y"` gives `"y"`, otherwise `"x"`. |
| `...` | For trailing comma support. |
| `axis_mode` | Character. One of `"modern"`, `"minimal"`, `"classic"` `"void"`. Default `"modern"`. |
| `grid_mode` | Character. One of `"flow"`, `"drift"`, `"keep"`, `"drop"`. Default `"flow"`. |

### Details

`axis_mode` controls what happens to axis lines, ticks, text, and titles:

**classic** Removes ticks on discrete axes only.

**modern** Like `classic`, plus removes the axis line and ticks on the non-orientation axis.

**minimal** Removes all axis lines and ticks, regardless of orientation or discreteness.

**void** Like `minimal`, plus removes all axis text and titles.

`grid_mode` controls what happens to panel gridlines:

**keep** Leaves panel gridlines unchanged.

**drift** Removes gridlines on the orientation axis, but only when at least one axis is discrete.

**flow** Removes gridlines on the orientation axis unconditionally.

**drop** Removes all panel gridlines.

### Value

A ggplot2 theme object.

---

## `refine_legend` *Move Legend*

---

### Description

Helper shortcut to set legend position, location, and margins.

### Usage

```
refine_legend(position = "right", ...)
```

### Arguments

| | |
|---|---|
| `position` | Character. Where to place the legend ("right", "top", or "bottom"). |
| `...` | For trailing comma support. |

### Value

A ggplot2 theme object.

## scale_colour_blend_binned

*Scale fill, and derive colour by blending (binned)*

### Description

Scales `fill` with a binned colour scale, and additionally maps `colour` to a blended version of the resulting `fill`, via `aes_colour_blend()`. The `colour` legend is suppressed since `fill` already communicates the mapping.

### Usage

```
scale_colour_blend_binned(blend = NULL, ...)
```

### Arguments

| | |
|---|---|
| `blend` | A function that takes a colour vector and returns a blended colour vector. |
| `...` | Additional arguments passed on to `ggplot2::scale_colour_binned()`, and `ggplot2::scale_fill_binned()`. |

### Value

A `list` of ggplot2 components (a mapping, a binned colour/fill scale, and a guide) that can be added to a ggplot object.

## scale_colour_blend_continuous

*Scale fill, and derive colour by blending (continuous)*

### Description

Scales `fill` with a continuous colour scale, and additionally maps `colour` to a blended version of the resulting `fill`, via `aes_colour_blend()`. The `colour` legend is suppressed since `fill` already communicates the mapping.

### Usage

```
scale_colour_blend_continuous(blend = NULL, ...)
```

### Arguments

| | |
|---|---|
| `blend` | A function that takes a colour vector and returns a blended colour vector. |
| `...` | Additional arguments passed on to `ggplot2::scale_colour_continuous()`, and `ggplot2::scale_fill_continuous()`. |

## Value

A `list` of ggplot2 components (a mapping, a continuous colour/fill scale, and a guide) that can be added to a ggplot object.

---

`scale_colour_blend_discrete` *Scale fill, and derive colour by blending (discrete)*

---

## Description

Scales `fill` with a discrete colour scale, and additionally maps `colour` to a blended version of the resulting `fill`, via `aes_colour_blend()`. The `colour` legend is suppressed since `fill` already communicates the mapping.

## Usage

```
scale_colour_blend_discrete(blend = NULL, ...)
```

## Arguments

| | |
|---|---|
| `blend` | A function that takes a colour vector and returns a blended colour vector. |
| `...` | Additional arguments passed on to `ggplot2::scale_colour_discrete()`, and `ggplot2::scale_fill_discrete()`. |

## Value

A `list` of ggplot2 components (a mapping, a discrete colour/fill scale, and a guide) that can be added to a ggplot object.

---

`scale_fill_blend_binned` *Scale colour, and derive fill by blending (binned)*

---

## Description

Scales `colour` with a binned colour scale, and additionally maps `fill` to a blended version of the resulting `colour`, via `aes_fill_blend()`. The `fill` legend is suppressed since `colour` already communicates the mapping.

## Usage

```
scale_fill_blend_binned(blend = NULL, ...)
```

### Arguments

| | |
|---|---|
| blend | A function that takes a colour vector and returns a blended colour vector. |
| ... | Additional arguments passed on to ggplot2::scale_colour_binned(), and ggplot2::scale_fill_binned(). |

### Value

A list of ggplot2 components (a mapping, a binned colour/fill scale, and a guide) that can be added to a ggplot object.

---

## scale_fill_blend_continuous

*Scale colour, and derive fill by blending (continuous)*

---

### Description

Scales colour with a continuous colour scale, and additionally maps fill to a blended version of the resulting colour, via aes_fill_blend(). The fill legend is suppressed since colour already communicates the mapping.

### Usage

```
scale_fill_blend_continuous(blend = NULL, ...)
```

### Arguments

| | |
|---|---|
| blend | A function that takes a colour vector and returns a blended colour vector. |
| ... | Additional arguments passed on to ggplot2::scale_colour_continuous(), and ggplot2::scale_fill_continuous(). |

### Value

A list of ggplot2 components (a mapping, a continuous colour/fill scale, and a guide) that can be added to a ggplot object.

## scale_fill_blend_discrete *Scale colour, and derive fill by blending (discrete)*

### Description

Scales `colour` with a discrete colour scale, and additionally maps `fill` to a blended version of the resulting `colour`, via `aes_fill_blend()`. The `fill` legend is suppressed since `colour` already communicates the mapping.

### Usage

```
scale_fill_blend_discrete(blend = NULL, ...)
```

### Arguments

| | |
|---|---|
| `blend` | A function that takes a colour vector and returns a blended colour vector. |
| `...` | Additional arguments passed on to `ggplot2::scale_colour_discrete()`, and `ggplot2::scale_fill_discrete()`. |

### Value

A `list` of ggplot2 components (a mapping, a discrete colour/fill scale, and a guide) that can be added to a ggplot object.

## scale_x_zero *Set continuous x-axis minimum flush to zero*

### Description

A convenience wrapper around `ggplot2::scale_x_continuous()` that sets the lower limit of the x-axis strictly to zero with no padding by default, while allowing full customization of scale parameters.

### Usage

```
scale_x_zero(expand = ggplot2::expansion(c(0, 0.05)), limits = c(0, NA), ...)
```

### Arguments

| | |
|---|---|
| `expand` | Padding multiplier/addend vector. Defaults to `expansion(c(0, 0.05))`. |
| `limits` | Axis limits. Defaults to `c(0, NA)` to force the lower bound to zero. |
| `...` | Additional arguments passed on to `ggplot2::scale_x_continuous()`. |

### Value

A `ScaleContinuousPosition` object.

scale_y_zero *Set continuous y-axis minimum flush to zero*

## Description

A convenience wrapper around `ggplot2::scale_y_continuous()` that sets the lower limit of the y-axis strictly to zero with no padding by default, while allowing full customization of scale parameters.

## Usage

```
scale_y_zero(expand = ggplot2::expansion(c(0, 0.05)), limits = c(0, NA), ...)
```

## Arguments

| | |
|---|---|
| `expand` | Padding multiplier/addend vector. Defaults to `expansion(c(0, 0.05))`. |
| `limits` | Axis limits. Defaults to `c(0, NA)` to force the lower bound to zero. |
| `...` | Additional arguments passed on to `ggplot2::scale_y_continuous()`. |

## Value

A `ScaleContinuousPosition` object.

set_darks *set_darks*

## Description

Builds `theme_darks()` and registers it as the session-wide default theme with `ggplot2::set_theme()`. All arguments are forwarded to `theme_darks()`.

## Usage

```
set_darks(
  ...,
  text_size = 10,
  text_family = "",
  text_colour = "#CECDC3",
  title_size = NULL,
  title_family = NULL,
  title_colour = NULL,
  subtitle_size = NULL,
  subtitle_family = NULL,
  subtitle_colour = NULL,
  caption_size = NULL,
```

```
  caption_family = NULL,
  caption_colour = NULL,
  caption_hjust = 0,
  legend_position = "right",
  legend_axis_line_colour = NULL,
  legend_axis_line_linewidth = NULL,
  legend_background_fill = NULL,
  legend_key_fill = NULL,
  legend_ticks_colour = NULL,
  legend_ticks_linewidth = NULL,
  legend_ticks_linetype = 1,
  legend_ticks_length = grid::unit(c(2.75, 0), "pt"),
  axis_line_colour = NULL,
  axis_line_linewidth = 0.15,
  axis_ticks_colour = NULL,
  axis_ticks_linewidth = NULL,
  axis_ticks_length = grid::unit(3.66, "pt"),
  panel_background_fill = "#282726",
  panel_grid_colour = "#100F0F",
  panel_grid_linetype = 1,
  panel_grid_linewidth = 1,
  panel_grid_minor_linetype = 1,
  panel_grid_minor_linewidth = ggplot2::rel(0.5),
  plot_background_fill = "#100F0F"
)
```

## Arguments

| | |
|---|---|
| `...` | Require named arguments (and support trailing commas). |
| `text_size` | The base size of the text theme element. Defaults to 10. |
| `text_family` | The base family of the text theme element. Defaults to "". |
| `text_colour` | The base colour of the text theme element. |
| `title_size` | The size of the `plot.title` theme element. Defaults to `text_size`. |
| `title_family` | The family of the `plot.title` theme element. Defaults to `text_family`. |
| `title_colour` | The colour of the `plot.title` theme element. Defaults to `text_colour`. |
| `subtitle_size` | The size of the `plot.subtitle` theme element. Defaults to `text_size`. |
| `subtitle_family` | The family of the `plot.subtitle` theme element. Defaults to `text_family`. |
| `subtitle_colour` | The colour of the `plot.subtitle` theme element. Defaults to `text_colour`. |
| `caption_size` | The size of the `plot.caption` theme element. Defaults to `text_size`. |
| `caption_family` | The family of the `plot.caption` theme element. Defaults to `text_family`. |
| `caption_colour` | The colour of the `plot.caption` theme element. Defaults to `text_colour`. |
| `caption_hjust` | The horizontal justification of the `plot.caption` theme element. Defaults to 0. |

`legend_position`
: The position of the legend. Either "right", "top" or "bottom".

`legend_axis_line_colour`
: The colour of the legend.axis.line theme element.

`legend_axis_line_linewidth`
: The linewidth of the legend.axis.line theme element.

`legend_background_fill`
: The fill (and colour) of the `legend.background` theme element.

`legend_key_fill`
: The fill (and colour) of the legend.key theme element.

`legend_ticks_colour`
: The colour of the legend.ticks theme element.

`legend_ticks_linewidth`
: The linewidth of the legend.ticks theme element.

`legend_ticks_linetype`
: The linetype of the legend.ticks theme element. Defaults to 1.

`legend_ticks_length`
: The length of the legend.ticks.length theme element.

`axis_line_colour`
: The colour of the axis.line theme element. Defaults to `text_colour`.

`axis_line_linewidth`
: The linewidth of the axis.line theme element.

`axis_ticks_colour`
: The colour of the axis.ticks theme element.

`axis_ticks_linewidth`
: The linewidth of the axis.ticks theme element.

`axis_ticks_length`
: The length of the axis.ticks.length theme element.

`panel_background_fill`
: The fill (and colour) of the panel.background theme element.

`panel_grid_colour`
: The colour of the panel.grid theme element.

`panel_grid_linetype`
: The linetype of the panel.grid.major theme element.

`panel_grid_linewidth`
: The linewidth of the panel.grid.major theme element.

`panel_grid_minor_linetype`
: The linetype of the panel.grid.minor theme element.

`panel_grid_minor_linewidth`
: The linewidth of the panel.grid.minor theme element.

`plot_background_fill`
: The fill (and colour) of the plot.background theme element.

## Details

Set the darks theme as the active ggplot2 theme

## Value

Invisibly returns the previously active theme, so it can be restored with `ggplot2::set_theme()`.

---

`set_greys` *set_greys*

---

## Description

Builds `theme_greys()` and registers it as the session-wide default theme with `ggplot2::set_theme()`. All arguments are forwarded to `theme_greys()`.

## Usage

```
set_greys(
  ...,
  text_size = 10,
  text_family = "",
  text_colour = "#100F0F",
  title_size = NULL,
  title_family = NULL,
  title_colour = NULL,
  subtitle_size = NULL,
  subtitle_family = NULL,
  subtitle_colour = NULL,
  caption_size = NULL,
  caption_family = NULL,
  caption_colour = NULL,
  caption_hjust = 0,
  legend_position = "right",
  legend_axis_line_colour = NULL,
  legend_axis_line_linewidth = NULL,
  legend_background_fill = NULL,
  legend_key_fill = NULL,
  legend_ticks_colour = NULL,
  legend_ticks_linewidth = NULL,
  legend_ticks_linetype = 1,
  legend_ticks_length = grid::unit(c(2.75, 0), "pt"),
  axis_line_colour = NULL,
  axis_line_linewidth = 0.15,
  axis_ticks_colour = NULL,
  axis_ticks_linewidth = NULL,
  axis_ticks_length = grid::unit(3.66, "pt"),
  panel_background_fill = "#F2F0E5FF",
  panel_grid_colour = "white",
  panel_grid_linetype = 1,
  panel_grid_linewidth = 1,
```

```
  panel_grid_minor_linetype = 1,
  panel_grid_minor_linewidth = ggplot2::rel(0.5),
  plot_background_fill = "white"
)
```

## Arguments

| | |
|---|---|
| ... | Require named arguments (and support trailing commas). |
| text_size | The base size of the text theme element. Defaults to 10. |
| text_family | The base family of the text theme element. Defaults to "". |
| text_colour | The base colour of the text theme element. |
| title_size | The size of the plot.title theme element. Defaults to text_size. |
| title_family | The family of the plot.title theme element. Defaults to text_family. |
| title_colour | The colour of the plot.title theme element. Defaults to text_colour. |
| subtitle_size | The size of the plot.subtitle theme element. Defaults to text_size. |
| subtitle_family | The family of the plot.subtitle theme element. Defaults to text_family. |
| subtitle_colour | The colour of the plot.subtitle theme element. Defaults to text_colour. |
| caption_size | The size of the plot.caption theme element. Defaults to text_size. |
| caption_family | The family of the plot.caption theme element. Defaults to text_family. |
| caption_colour | The colour of the plot.caption theme element. Defaults to text_colour. |
| caption_hjust | The horizontal justification of the plot.caption theme element. Defaults to 0. |
| legend_position | The position of the legend. Either "right", "top" or "bottom". |
| legend_axis_line_colour | The colour of the legend.axis.line theme element. |
| legend_axis_line_linewidth | The linewidth of the legend.axis.line theme element. |
| legend_background_fill | The fill (and colour) of the legend.background theme element. |
| legend_key_fill | The fill (and colour) of the legend.key theme element. |
| legend_ticks_colour | The colour of the legend.ticks theme element. |
| legend_ticks_linewidth | The linewidth of the legend.ticks theme element. |
| legend_ticks_linetype | The linetype of the legend.ticks theme element. Defaults to 1. |
| legend_ticks_length | The length of the legend.ticks.length theme element. |
| axis_line_colour | The colour of the axis.line theme element. Defaults to text_colour. |

`axis_line_linewidth`
: The linewidth of the axis.line theme element.

`axis_ticks_colour`
: The colour of the axis.ticks theme element.

`axis_ticks_linewidth`
: The linewidth of the axis.ticks theme element.

`axis_ticks_length`
: The length of the axis.ticks.length theme element.

`panel_background_fill`
: The fill (and colour) of the panel.background theme element.

`panel_grid_colour`
: The colour of the panel.grid theme element.

`panel_grid_linetype`
: The linetype of the panel.grid.major theme element.

`panel_grid_linewidth`
: The linewidth of the panel.grid.major theme element.

`panel_grid_minor_linetype`
: The linetype of the panel.grid.minor theme element.

`panel_grid_minor_linewidth`
: The linewidth of the panel.grid.minor theme element.

`plot_background_fill`
: The fill (and colour) of the plot.background theme element.

## Details

Set the greys theme as the active ggplot2 theme

## Value

Invisibly returns the previously active theme, so it can be restored with `ggplot2::set_theme()`.

---

`set_lights` *set_lights*

---

## Description

Builds `theme_lights()` and registers it as the session-wide default theme with `ggplot2::set_theme()`. All arguments are forwarded to `theme_lights()`.

## Usage

```
set_lights(
  ...,
  text_size = 10,
  text_family = "",
  text_colour = "#100F0F",
```

```
  title_size = NULL,
  title_family = NULL,
  title_colour = NULL,
  subtitle_size = NULL,
  subtitle_family = NULL,
  subtitle_colour = NULL,
  caption_size = NULL,
  caption_family = NULL,
  caption_colour = NULL,
  caption_hjust = 0,
  legend_position = "right",
  legend_axis_line_colour = NULL,
  legend_axis_line_linewidth = NULL,
  legend_background_fill = NULL,
  legend_key_fill = NULL,
  legend_ticks_colour = NULL,
  legend_ticks_linewidth = NULL,
  legend_ticks_linetype = 1,
  legend_ticks_length = grid::unit(c(2.75, 0), "pt"),
  axis_line_colour = NULL,
  axis_line_linewidth = 0.15,
  axis_ticks_colour = NULL,
  axis_ticks_linewidth = NULL,
  axis_ticks_length = grid::unit(3.66, "pt"),
  panel_background_fill = "white",
  panel_grid_colour = "#F2F0E5",
  panel_grid_linetype = 1,
  panel_grid_linewidth = 1,
  panel_grid_minor_linetype = 1,
  panel_grid_minor_linewidth = ggplot2::rel(0.5),
  plot_background_fill = "white"
)
```

## Arguments

| | |
|---|---|
| `...` | Require named arguments (and support trailing commas). |
| `text_size` | The base size of the text theme element. Defaults to 10. |
| `text_family` | The base family of the text theme element. Defaults to "". |
| `text_colour` | The base colour of the text theme element. |
| `title_size` | The size of the `plot.title` theme element. Defaults to `text_size`. |
| `title_family` | The family of the `plot.title` theme element. Defaults to `text_family`. |
| `title_colour` | The colour of the `plot.title` theme element. Defaults to `text_colour`. |
| `subtitle_size` | The size of the `plot.subtitle` theme element. Defaults to `text_size`. |
| `subtitle_family` | The family of the `plot.subtitle` theme element. Defaults to `text_family`. |
| `subtitle_colour` | The colour of the `plot.subtitle` theme element. Defaults to `text_colour`. |

caption_size The size of the plot.caption theme element. Defaults to text_size.

caption_family The family of the plot.caption theme element. Defaults to text_family.

caption_colour The colour of the plot.caption theme element. Defaults to text_colour.

caption_hjust The horizontal justification of the plot.caption theme element. Defaults to 0.

legend_position
The position of the legend. Either "right", "top" or "bottom".

legend_axis_line_colour
The colour of the legend.axis.line theme element.

legend_axis_line_linewidth
The linewidth of the legend.axis.line theme element.

legend_background_fill
The fill (and colour) of the legend.background theme element.

legend_key_fill
The fill (and colour) of the legend.key theme element.

legend_ticks_colour
The colour of the legend.ticks theme element.

legend_ticks_linewidth
The linewidth of the legend.ticks theme element.

legend_ticks_linetype
The linetype of the legend.ticks theme element. Defaults to 1.

legend_ticks_length
The length of the legend.ticks.length theme element.

axis_line_colour
The colour of the axis.line theme element. Defaults to text_colour.

axis_line_linewidth
The linewidth of the axis.line theme element.

axis_ticks_colour
The colour of the axis.ticks theme element.

axis_ticks_linewidth
The linewidth of the axis.ticks theme element.

axis_ticks_length
The length of the axis.ticks.length theme element.

panel_background_fill
The fill (and colour) of the panel.background theme element.

panel_grid_colour
The colour of the panel.grid theme element.

panel_grid_linetype
The linetype of the panel.grid.major theme element.

panel_grid_linewidth
The linewidth of the panel.grid.major theme element.

panel_grid_minor_linetype
The linetype of the panel.grid.minor theme element.

panel_grid_minor_linewidth
The linewidth of the panel.grid.minor theme element.

plot_background_fill
The fill (and colour) of the plot.background theme element.

### Details

Set the lights theme as the active ggplot2 theme

### Value

Invisibly returns the previously active theme, so it can be restored with `ggplot2::set_theme()`.

---

`theme_darks` *theme_darks*

---

### Description

A complete theme with a dark plot and panel background. Uses flexoki inspired colours.

### Usage

```
theme_darks(
  ...,
  text_size = 10,
  text_family = "",
  text_colour = "#CECDC3",
  title_size = NULL,
  title_family = NULL,
  title_colour = NULL,
  subtitle_size = NULL,
  subtitle_family = NULL,
  subtitle_colour = NULL,
  caption_size = NULL,
  caption_family = NULL,
  caption_colour = NULL,
  caption_hjust = 0,
  legend_position = "right",
  legend_axis_line_colour = NULL,
  legend_axis_line_linewidth = NULL,
  legend_background_fill = NULL,
  legend_key_fill = NULL,
  legend_ticks_colour = NULL,
  legend_ticks_linewidth = NULL,
  legend_ticks_linetype = 1,
  legend_ticks_length = grid::unit(c(2.75, 0), "pt"),
  axis_line_colour = NULL,
  axis_line_linewidth = 0.15,
  axis_ticks_colour = NULL,
  axis_ticks_linewidth = NULL,
  axis_ticks_length = grid::unit(3.66, "pt"),
  panel_background_fill = "#282726",
  panel_grid_colour = "#100F0F",
```

```
  panel_grid_linetype = 1,
  panel_grid_linewidth = 1,
  panel_grid_minor_linetype = 1,
  panel_grid_minor_linewidth = ggplot2::rel(0.5),
  plot_background_fill = "#100F0F"
)
```

## Arguments

| | |
|---|---|
| `...` | Require named arguments (and support trailing commas). |
| `text_size` | The base size of the text theme element. Defaults to 10. |
| `text_family` | The base family of the text theme element. Defaults to "". |
| `text_colour` | The base colour of the text theme element. |
| `title_size` | The size of the `plot.title` theme element. Defaults to `text_size`. |
| `title_family` | The family of the `plot.title` theme element. Defaults to `text_family`. |
| `title_colour` | The colour of the `plot.title` theme element. Defaults to `text_colour`. |
| `subtitle_size` | The size of the `plot.subtitle` theme element. Defaults to `text_size`. |
| `subtitle_family` | The family of the `plot.subtitle` theme element. Defaults to `text_family`. |
| `subtitle_colour` | The colour of the `plot.subtitle` theme element. Defaults to `text_colour`. |
| `caption_size` | The size of the `plot.caption` theme element. Defaults to `text_size`. |
| `caption_family` | The family of the `plot.caption` theme element. Defaults to `text_family`. |
| `caption_colour` | The colour of the `plot.caption` theme element. Defaults to `text_colour`. |
| `caption_hjust` | The horizontal justification of the `plot.caption` theme element. Defaults to 0. |
| `legend_position` | The position of the legend. Either "right", "top" or "bottom". |
| `legend_axis_line_colour` | The colour of the legend.axis.line theme element. |
| `legend_axis_line_linewidth` | The linewidth of the legend.axis.line theme element. |
| `legend_background_fill` | The fill (and colour) of the `legend.background` theme element. |
| `legend_key_fill` | The fill (and colour) of the legend.key theme element. |
| `legend_ticks_colour` | The colour of the legend.ticks theme element. |
| `legend_ticks_linewidth` | The linewidth of the legend.ticks theme element. |
| `legend_ticks_linetype` | The linetype of the legend.ticks theme element. Defaults to 1. |
| `legend_ticks_length` | The length of the legend.ticks.length theme element. |

`axis_line_colour`
: The colour of the axis.line theme element. Defaults to `text_colour`.

`axis_line_linewidth`
: The linewidth of the axis.line theme element.

`axis_ticks_colour`
: The colour of the axis.ticks theme element.

`axis_ticks_linewidth`
: The linewidth of the axis.ticks theme element.

`axis_ticks_length`
: The length of the axis.ticks.length theme element.

`panel_background_fill`
: The fill (and colour) of the panel.background theme element.

`panel_grid_colour`
: The colour of the panel.grid theme element.

`panel_grid_linetype`
: The linetype of the panel.grid.major theme element.

`panel_grid_linewidth`
: The linewidth of the panel.grid.major theme element.

`panel_grid_minor_linetype`
: The linetype of the panel.grid.minor theme element.

`panel_grid_minor_linewidth`
: The linewidth of the panel.grid.minor theme element.

`plot_background_fill`
: The fill (and colour) of the plot.background theme element.

## Details

Dark theme

## Value

A ggplot theme.

---

`theme_greys` *theme_greys*

---

## Description

A complete theme with a light grey panel background and white panel grid colour. Uses flexoki inspired colours.

## Usage

```
theme_greys(
  ...,
  text_size = 10,
  text_family = "",
  text_colour = "#100F0F",
  title_size = NULL,
  title_family = NULL,
  title_colour = NULL,
  subtitle_size = NULL,
  subtitle_family = NULL,
  subtitle_colour = NULL,
  caption_size = NULL,
  caption_family = NULL,
  caption_colour = NULL,
  caption_hjust = 0,
  legend_position = "right",
  legend_axis_line_colour = NULL,
  legend_axis_line_linewidth = NULL,
  legend_background_fill = NULL,
  legend_key_fill = NULL,
  legend_ticks_colour = NULL,
  legend_ticks_linewidth = NULL,
  legend_ticks_linetype = 1,
  legend_ticks_length = grid::unit(c(2.75, 0), "pt"),
  axis_line_colour = NULL,
  axis_line_linewidth = 0.15,
  axis_ticks_colour = NULL,
  axis_ticks_linewidth = NULL,
  axis_ticks_length = grid::unit(3.66, "pt"),
  panel_background_fill = "#F2F0E5FF",
  panel_grid_colour = "white",
  panel_grid_linetype = 1,
  panel_grid_linewidth = 1,
  panel_grid_minor_linetype = 1,
  panel_grid_minor_linewidth = ggplot2::rel(0.5),
  plot_background_fill = "white"
)
```

## Arguments

| | |
|---|---|
| `...` | Require named arguments (and support trailing commas). |
| `text_size` | The base size of the text theme element. Defaults to 10. |
| `text_family` | The base family of the text theme element. Defaults to "". |
| `text_colour` | The base colour of the text theme element. |
| `title_size` | The size of the `plot.title` theme element. Defaults to `text_size`. |
| `title_family` | The family of the `plot.title` theme element. Defaults to `text_family`. |

`title_colour` The colour of the `plot.title` theme element. Defaults to `text_colour`.

`subtitle_size` The size of the `plot.subtitle` theme element. Defaults to `text_size`.

`subtitle_family`
The family of the `plot.subtitle` theme element. Defaults to `text_family`.

`subtitle_colour`
The colour of the `plot.subtitle` theme element. Defaults to `text_colour`.

`caption_size` The size of the `plot.caption` theme element. Defaults to `text_size`.

`caption_family` The family of the `plot.caption` theme element. Defaults to `text_family`.

`caption_colour` The colour of the `plot.caption` theme element. Defaults to `text_colour`.

`caption_hjust` The horizontal justification of the `plot.caption` theme element. Defaults to 0.

`legend_position`
The position of the legend. Either "right", "top" or "bottom".

`legend_axis_line_colour`
The colour of the legend.axis.line theme element.

`legend_axis_line_linewidth`
The linewidth of the legend.axis.line theme element.

`legend_background_fill`
The fill (and colour) of the `legend.background` theme element.

`legend_key_fill`
The fill (and colour) of the legend.key theme element.

`legend_ticks_colour`
The colour of the legend.ticks theme element.

`legend_ticks_linewidth`
The linewidth of the legend.ticks theme element.

`legend_ticks_linetype`
The linetype of the legend.ticks theme element. Defaults to 1.

`legend_ticks_length`
The length of the legend.ticks.length theme element.

`axis_line_colour`
The colour of the axis.line theme element. Defaults to `text_colour`.

`axis_line_linewidth`
The linewidth of the axis.line theme element.

`axis_ticks_colour`
The colour of the axis.ticks theme element.

`axis_ticks_linewidth`
The linewidth of the axis.ticks theme element.

`axis_ticks_length`
The length of the axis.ticks.length theme element.

`panel_background_fill`
The fill (and colour) of the panel.background theme element.

`panel_grid_colour`
The colour of the panel.grid theme element.

`panel_grid_linetype`
The linetype of the panel.grid.major theme element.

panel_grid_linewidth
: The linewidth of the panel.grid.major theme element.

panel_grid_minor_linetype
: The linetype of the panel.grid.minor theme element.

panel_grid_minor_linewidth
: The linewidth of the panel.grid.minor theme element.

plot_background_fill
: The fill (and colour) of the plot.background theme element.

## Details

Grey theme

## Value

A ggplot theme.

---

`theme_lights` *theme_lights*

---

## Description

A complete theme with a white panel background and a light panel grid colour. Uses flexoki inspired colours.

## Usage

```
theme_lights(
  ...,
  text_size = 10,
  text_family = "",
  text_colour = "#100F0F",
  title_size = NULL,
  title_family = NULL,
  title_colour = NULL,
  subtitle_size = NULL,
  subtitle_family = NULL,
  subtitle_colour = NULL,
  caption_size = NULL,
  caption_family = NULL,
  caption_colour = NULL,
  caption_hjust = 0,
  legend_position = "right",
  legend_axis_line_colour = NULL,
  legend_axis_line_linewidth = NULL,
  legend_background_fill = NULL,
  legend_key_fill = NULL,
```

```
  legend_ticks_colour = NULL,
  legend_ticks_linewidth = NULL,
  legend_ticks_linetype = 1,
  legend_ticks_length = grid::unit(c(2.75, 0), "pt"),
  axis_line_colour = NULL,
  axis_line_linewidth = 0.15,
  axis_ticks_colour = NULL,
  axis_ticks_linewidth = NULL,
  axis_ticks_length = grid::unit(3.66, "pt"),
  panel_background_fill = "white",
  panel_grid_colour = "#F2F0E5",
  panel_grid_linetype = 1,
  panel_grid_linewidth = 1,
  panel_grid_minor_linetype = 1,
  panel_grid_minor_linewidth = ggplot2::rel(0.5),
  plot_background_fill = "white"
)
```

## Arguments

| | |
|---|---|
| `...` | Require named arguments (and support trailing commas). |
| `text_size` | The base size of the text theme element. Defaults to 10. |
| `text_family` | The base family of the text theme element. Defaults to "". |
| `text_colour` | The base colour of the text theme element. |
| `title_size` | The size of the `plot.title` theme element. Defaults to `text_size`. |
| `title_family` | The family of the `plot.title` theme element. Defaults to `text_family`. |
| `title_colour` | The colour of the `plot.title` theme element. Defaults to `text_colour`. |
| `subtitle_size` | The size of the `plot.subtitle` theme element. Defaults to `text_size`. |
| `subtitle_family` | The family of the `plot.subtitle` theme element. Defaults to `text_family`. |
| `subtitle_colour` | The colour of the `plot.subtitle` theme element. Defaults to `text_colour`. |
| `caption_size` | The size of the `plot.caption` theme element. Defaults to `text_size`. |
| `caption_family` | The family of the `plot.caption` theme element. Defaults to `text_family`. |
| `caption_colour` | The colour of the `plot.caption` theme element. Defaults to `text_colour`. |
| `caption_hjust` | The horizontal justification of the `plot.caption` theme element. Defaults to 0. |
| `legend_position` | The position of the legend. Either "right", "top" or "bottom". |
| `legend_axis_line_colour` | The colour of the legend.axis.line theme element. |
| `legend_axis_line_linewidth` | The linewidth of the legend.axis.line theme element. |
| `legend_background_fill` | The fill (and colour) of the `legend.background` theme element. |

`legend_key_fill`
: The fill (and colour) of the legend.key theme element.

`legend_ticks_colour`
: The colour of the legend.ticks theme element.

`legend_ticks_linewidth`
: The linewidth of the legend.ticks theme element.

`legend_ticks_linetype`
: The linetype of the legend.ticks theme element. Defaults to 1.

`legend_ticks_length`
: The length of the legend.ticks.length theme element.

`axis_line_colour`
: The colour of the axis.line theme element. Defaults to `text_colour`.

`axis_line_linewidth`
: The linewidth of the axis.line theme element.

`axis_ticks_colour`
: The colour of the axis.ticks theme element.

`axis_ticks_linewidth`
: The linewidth of the axis.ticks theme element.

`axis_ticks_length`
: The length of the axis.ticks.length theme element.

`panel_background_fill`
: The fill (and colour) of the panel.background theme element.

`panel_grid_colour`
: The colour of the panel.grid theme element.

`panel_grid_linetype`
: The linetype of the panel.grid.major theme element.

`panel_grid_linewidth`
: The linewidth of the panel.grid.major theme element.

`panel_grid_minor_linetype`
: The linetype of the panel.grid.minor theme element.

`panel_grid_minor_linewidth`
: The linewidth of the panel.grid.minor theme element.

`plot_background_fill`
: The fill (and colour) of the plot.background theme element.

## Details

Lights theme

## Value

A ggplot theme.

update_darks *update_darks*

## Description

Updates the currently active/set theme in place with the colours of `theme_darks()`, via `ggplot2::theme_update()`. Useful for recolouring every plot for the rest of the session without swapping out the full theme.

## Usage

```
update_darks(
  ...,
  text_colour = "#CECDC3",
  title_colour = NULL,
  subtitle_colour = NULL,
  caption_colour = NULL,
  axis_line_colour = NULL,
  axis_ticks_colour = NULL,
  legend_axis_line_colour = NULL,
  legend_background_fill = NULL,
  legend_key_fill = NULL,
  legend_ticks_colour = NULL,
  panel_background_fill = "#282726",
  panel_grid_colour = "#100F0F",
  plot_background_fill = "#100F0F"
)
```

## Arguments

| | |
|---|---|
| `...` | Require named arguments (and support trailing commas). |
| `text_colour` | The base colour of the text theme element. |
| `title_colour` | The colour of the `plot.title` theme element. Defaults to `text_colour`. |
| `subtitle_colour` | The colour of the `plot.subtitle` theme element. Defaults to `text_colour`. |
| `caption_colour` | The colour of the `plot.caption` theme element. Defaults to `text_colour`. |
| `axis_line_colour` | The colour of the axis.line theme element. Defaults to `text_colour`. |
| `axis_ticks_colour` | The colour of the axis.ticks theme element. Defaults to `axis_line_colour`. |
| `legend_axis_line_colour` | The colour of the legend.axis.line theme element. Defaults to `plot_background_fill`. |
| `legend_background_fill` | The fill (and colour) of the `legend.background` theme element. Defaults to `plot_background_fill`. |

`legend_key_fill`
: The fill (and colour) of the legend.key theme element. Defaults to `plot_background_fill`.

`legend_ticks_colour`
: The colour of the legend.ticks theme element. Defaults to `legend_axis_line_colour`.

`panel_background_fill`
: The fill (and colour) of the panel.background theme element.

`panel_grid_colour`
: The colour of the panel.grid theme element.

`plot_background_fill`
: The fill (and colour) of the plot.background theme element.

## Details

Update the set theme (Darks)

## Value

The previous theme, invisibly (see `ggplot2::theme_update()`).

---

`update_greys` *update_greys*

---

## Description

Updates the currently active/set theme in place with the colours of `theme_greys()`, via `ggplot2::theme_update()`. Useful for recolouring every plot for the rest of the session without swapping out the full theme.

## Usage

```
update_greys(
  ...,
  text_colour = "#100F0F",
  title_colour = NULL,
  subtitle_colour = NULL,
  caption_colour = NULL,
  axis_line_colour = NULL,
  axis_ticks_colour = NULL,
  legend_axis_line_colour = NULL,
  legend_background_fill = NULL,
  legend_key_fill = NULL,
  legend_ticks_colour = NULL,
  panel_background_fill = "#F2F0E5FF",
  panel_grid_colour = "white",
  plot_background_fill = "white"
)
```

### Arguments

| | |
|---|---|
| ... | Require named arguments (and support trailing commas). |
| text_colour | The base colour of the text theme element. |
| title_colour | The colour of the plot.title theme element. Defaults to text_colour. |
| subtitle_colour | The colour of the plot.subtitle theme element. Defaults to text_colour. |
| caption_colour | The colour of the plot.caption theme element. Defaults to text_colour. |
| axis_line_colour | The colour of the axis.line theme element. Defaults to text_colour. |
| axis_ticks_colour | The colour of the axis.ticks theme element. Defaults to axis_line_colour. |
| legend_axis_line_colour | The colour of the legend.axis.line theme element. Defaults to plot_background_fill. |
| legend_background_fill | The fill (and colour) of the legend.background theme element. Defaults to plot_background_fill. |
| legend_key_fill | The fill (and colour) of the legend.key theme element. Defaults to plot_background_fill. |
| legend_ticks_colour | The colour of the legend.ticks theme element. Defaults to legend_axis_line_colour. |
| panel_background_fill | The fill (and colour) of the panel.background theme element. |
| panel_grid_colour | The colour of the panel.grid theme element. |
| plot_background_fill | The fill (and colour) of the plot.background theme element. |

### Details

Update the set theme (greys)

### Value

The previous theme, invisibly (see ggplot2::theme_update()).

---

## update_lights *update_lights*

---

### Description

Updates the currently active/set theme in place with the colours of theme_lights(), via ggplot2::theme_update(). Useful for recolouring every plot for the rest of the session without swapping out the full theme.

## Usage

```
update_lights(
  ...,
  text_colour = "#100F0F",
  title_colour = NULL,
  subtitle_colour = NULL,
  caption_colour = NULL,
  axis_line_colour = NULL,
  axis_ticks_colour = NULL,
  legend_axis_line_colour = NULL,
  legend_background_fill = NULL,
  legend_key_fill = NULL,
  legend_ticks_colour = NULL,
  panel_background_fill = "white",
  panel_grid_colour = "#F2F0E5",
  plot_background_fill = "white"
)
```

## Arguments

| | |
|---|---|
| `...` | Require named arguments (and support trailing commas). |
| `text_colour` | The base colour of the text theme element. |
| `title_colour` | The colour of the `plot.title` theme element. Defaults to `text_colour`. |
| `subtitle_colour` | The colour of the `plot.subtitle` theme element. Defaults to `text_colour`. |
| `caption_colour` | The colour of the `plot.caption` theme element. Defaults to `text_colour`. |
| `axis_line_colour` | The colour of the axis.line theme element. Defaults to `text_colour`. |
| `axis_ticks_colour` | The colour of the axis.ticks theme element. Defaults to `axis_line_colour`. |
| `legend_axis_line_colour` | The colour of the legend.axis.line theme element. Defaults to `plot_background_fill`. |
| `legend_background_fill` | The fill (and colour) of the `legend.background` theme element. Defaults to `plot_background_fill`. |
| `legend_key_fill` | The fill (and colour) of the legend.key theme element. Defaults to `plot_background_fill`. |
| `legend_ticks_colour` | The colour of the legend.ticks theme element. Defaults to `legend_axis_line_colour`. |
| `panel_background_fill` | The fill (and colour) of the panel.background theme element. |
| `panel_grid_colour` | The colour of the panel.grid theme element. |
| `plot_background_fill` | The fill (and colour) of the plot.background theme element. |

## Details

Update the set theme (Lights)

## Value

The previous theme, invisibly (see `ggplot2::theme_update()`).

---

`update_palette` *Update colour/fill palettes or fixed geom colour/fill*

---

## Description

Modifies active theme settings for fixed, discrete, and continuous palettes only for parameters explicitly provided by the user.

## Usage

```
update_palette(
  fixed = NULL,
  discrete = NULL,
  continuous = NULL,
  aesthetic = c("colour", "fill")
)
```

## Arguments

| | |
|---|---|
| `fixed` | Colour applied to geometric elements via `element_geom()`. Updates the aesthetics named in `aesthetic`. |
| `discrete` | Palette specification (e.g., `scales::pal_hue()`) for discrete scales (`palette.<aesthetic>.discrete`). |
| `continuous` | Palette specification for continuous scales (`palette.<aesthetic>.continuous`). |
| `aesthetic` | Which aesthetic(s) to update: `"colour"`, `"fill"`, or both (the default). |

## Value

Invisibly returns the result of the `theme_update()` calls.

## Examples

```
## Not run:
# Update fixed geom colour and fill
update_palette(fixed = "steelblue")

# Update only the fill of fixed geoms
update_palette(fixed = "steelblue", aesthetic = "fill")

# Update discrete palette for colour only
update_palette(discrete = scales::pal_hue(), aesthetic = "colour")
```

```
# Update continuous palette for both colour and fill
update_palette(continuous = scales::pal_viridis())

## End(Not run)
```

---

`update_panel_size` *Update panel dimensions in the current ggplot theme*

---

## Description

Modifies panel dimensions such as heights and widths by updating the global theme settings.

## Usage

```
update_panel_size(heights = ggplot2::waiver(), widths = ggplot2::waiver())
```

## Arguments

| | |
|---|---|
| `heights` | A `margin` or unit object specifying the panel heights (e.g., `grid::unit(5, "cm")`). |
| `widths` | A `margin` or unit object specifying the panel widths (e.g., `grid::unit(5, "cm")`). |

## Value

Invisibly returns the updated theme object.

## Examples

```
## Not run:
update_panel_size(
  heights = grid::unit(6, "cm"),
  widths = grid::unit(8, "cm")
)

## End(Not run)
```

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