Package 'ggscribe'

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Title Publication-Quality 'ggplot2' Annotation

Version 1.0.0

Description Annotation helper functions for publication-quality 'ggplot2' visualisation. These functions make it easier to annotate plots in a way that stays consistent with the set theme.

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BugReports https://github.com/davidhodge931/ggscribe/issues

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Contents

annotate_axis_bracket 2
annotate_axis_line 3
annotate_axis_text 4

annotate_axis_ticks 6
annotate_panel_background 7
annotate_panel_grid 8
annotate_panel_shade 9
annotate_reference_line 10
guide_sec_axis_text 11
sec_axis_text 12

Index **13**

`annotate_axis_bracket` *Annotate an axis bracket*

Description

Draws one or more brackets along a floating axis line. Each bracket spans `min(breaks)` to `max(breaks)` with caps at every break value. Requires `coord_cartesian(clip = "off")`.

Usage

```
annotate_axis_bracket(
  xintercept = NULL,
  yintercept = NULL,
  breaks,
  length = ggplot2::rel(1),
  colour = NULL,
  linewidth = NULL,
  linetype = NULL,
  layout = NULL
)
```

Arguments

`xintercept`	One or more x positions for vertical axis lines, in data coordinates or wrapped in `I()` for normalised panel coordinates (npc). May be a vector; each value produces a separate axis.
`yintercept`	One or more y positions for horizontal axis lines, in data coordinates or wrapped in `I()` for normalised panel coordinates (npc). May be a vector; each value produces a separate axis.
`breaks`	A numeric vector of length >= 2 in data coordinates, or wrapped in `I()` for npc. The bar spans `min(breaks)` to `max(breaks)`; caps are drawn at every break value. Pass a list the same length as the total number of axes to use different breaks per axis.
`length`	Length of the bracket caps. Supports `rel()`. Negative values flip the cap direction. Defaults to `rel(1)`. May be a vector the same length as the number of axes.

`colour`	Inherits from `axis.ticks` in the set theme (falling back through `axis.line` and `line`). May be a vector the same length as the number of axes.
`linewidth`	Inherits from `axis.ticks` in the set theme. Supports `rel()`. May be a vector the same length as the number of axes.
`linetype`	Inherits from `axis.ticks` in the set theme. May be a vector the same length as the number of axes.
`layout`	Controls which panels the annotation appears in. `NULL` (default) repeats in all panels. An integer targets a specific panel. `"fixed"` repeats in all panels ignoring faceting variables. See `ggplot2::layer()` for full details.

Details

Caps always point in the positive direction by default (right for `xintercept`, up for `yintercept`). Use a negative `length` to flip them (e.g. `length = -rel(1)`).

Value

A list of ggplot2 annotation layers.

---

annotate_axis_line *Annotate an axis line*

Description

Draws a full line at one or more floating positions, with style defaults taken from the `axis.line` element of the set theme. Requires `coord_cartesian(clip = "off")`.

Usage

```
annotate_axis_line(
  xintercept = NULL,
  yintercept = NULL,
  colour = NULL,
  linewidth = NULL,
  linetype = NULL,
  arrow = NULL,
  layout = NULL
)
```

Arguments

`xintercept`	One or more x positions for vertical axis lines, in data coordinates or wrapped in `I()` for normalised panel coordinates (npc). May be a vector; each value produces a separate line.
`yintercept`	One or more y positions for horizontal axis lines, in data coordinates or wrapped in `I()` for normalised panel coordinates (npc). May be a vector; each value produces a separate line.

colour	Inherits from axis.line in the set theme. May be a vector the same length as the total number of lines.
linewidth	Inherits from axis.line in the set theme. Supports rel(). May be a vector the same length as the total number of lines.
linetype	Inherits from axis.line in the set theme. May be a vector the same length as the total number of lines.
arrow	A grid::arrow() specification, or a list the same length as the total number of lines. Must use list() not c() when supplying multiple values. E.g. grid::arrow(angle = 15, length = unit(1.5, "mm"), type = "closed").
layout	Controls which panels the annotation appears in. NULL (default) repeats in all panels. An integer targets a specific panel. "fixed" repeats in all panels ignoring faceting variables. See ggplot2::layer() for full details.

Details

The arrow (if any) points in the positive direction by default — rightward for xintercept lines, upward for yintercept lines.

Value

A list of ggplot2 annotation layers.

---

annotate_axis_text *Annotate axis text*

Description

Draws text labels at specified break positions along a floating axis line, with style defaults taken from the axis.text element of the set theme. Requires coord_cartesian(clip = "off").

Usage

```
annotate_axis_text(
  xintercept = NULL,
  yintercept = NULL,
  breaks,
  labels = NULL,
  length = ggplot2::rel(1),
  angle = 0,
  hjust = NULL,
  vjust = NULL,
  colour = NULL,
  size = NULL,
  family = NULL,
  layout = NULL
)
```

Arguments

`xintercept`	One or more x positions for vertical axis lines, in data coordinates or wrapped in `I()` for normalised panel coordinates (npc). May be a vector; each value produces a separate axis.
`yintercept`	One or more y positions for horizontal axis lines, in data coordinates or wrapped in `I()` for normalised panel coordinates (npc). May be a vector; each value produces a separate axis.
`breaks`	A numeric vector of break positions in data coordinates, or wrapped in `I()` for npc. Pass a list the same length as the total number of axes to use different breaks per axis.
`labels`	One of: • `NULL` (default) to use break values as labels • A character vector recycled across all breaks in order • A function taking break values and returning labels • A list the same length as the number of axes, each element being one of the above
`length`	Offset from the axis line including tick length and margin. Supports `rel()`. Negative values place text on the opposite side. Defaults to `rel(1)`. May be a vector recycled across all breaks in order.
`angle`	Text rotation angle. Defaults to `0`. May be a vector recycled across all breaks in order.
`hjust`, `vjust`	Justification. Auto-calculated from axis direction and `angle` if `NULL`. May be a vector recycled across all breaks in order.
`colour`	Inherits from `axis.text` in the set theme. May be a vector recycled across all breaks in order.
`size`	Inherits from `axis.text` in the set theme. May be a vector recycled across all breaks in order.
`family`	Inherits from `axis.text` in the set theme. May be a vector recycled across all breaks in order.
`layout`	Controls which panels the annotation appears in. `NULL` (default) repeats in all panels. An integer targets a specific panel. `"fixed"` repeats in all panels ignoring faceting variables. See `ggplot2::layer()` for full details.

Details

Text always sits on the positive side of the axis by default (right of `xintercept` lines, above `yintercept` lines). Use a negative `length` to place text on the opposite side (e.g. `length = -rel(1)`).

Value

A list of ggplot2 annotation layers.

annotate_axis_ticks *Annotate axis ticks*

Description

Draws axis ticks at specified break positions along a floating axis line. Requires `coord_cartesian(clip = "off")`.

Usage

```
annotate_axis_ticks(
  xintercept = NULL,
  yintercept = NULL,
  breaks,
  length = ggplot2::rel(1),
  colour = NULL,
  linewidth = NULL,
  linetype = NULL,
  arrow = NULL,
  layout = NULL
)
```

Arguments

`xintercept`	One or more x positions for vertical axis lines, in data coordinates or wrapped in `I()` for normalised panel coordinates (npc). May be a vector; each value produces a separate axis.
`yintercept`	One or more y positions for horizontal axis lines, in data coordinates or wrapped in `I()` for normalised panel coordinates (npc). May be a vector; each value produces a separate axis.
`breaks`	A numeric vector of break positions in data coordinates, or wrapped in `I()` for npc. Pass a list the same length as the total number of axes to use different breaks per axis.
`length`	Total tick length. Supports `rel()`. Negative values flip the tick direction. Defaults to `rel(1)`. May be a vector recycled across all breaks in order.
`colour`	Inherits from `axis.ticks` in the set theme. May be a vector recycled across all breaks in order.
`linewidth`	Inherits from `axis.ticks` in the set theme. Supports `rel()`. May be a vector recycled across all breaks in order.
`linetype`	Inherits from `axis.ticks` in the set theme. May be a vector recycled across all breaks in order.
`arrow`	A `grid::arrow()` specification, or a list recycled across all breaks. The arrowhead points toward the axis line. Must use `list()` not `c()` when supplying multiple values. E.g. `grid::arrow(angle = 15, length = unit(1.5, "mm"), type = "closed")`.

`layout` Controls which panels the annotation appears in. `NULL` (default) repeats in all panels. An integer targets a specific panel. `"fixed"` repeats in all panels ignoring faceting variables. See `ggplot2::layer()` for full details.

Details

Ticks always point in the positive direction by default (right for `xintercept`, up for `yintercept`). Use a negative `length` to flip them (e.g. `length = -rel(1)`).

Value

A list of ggplot2 annotation layers.

`annotate_panel_background` *Annotate a panel background region*

Description

Draws filled rectangles over the panel. Defaults to the `panel.background` fill from the set theme at full opacity, making it useful for layering a solid background over existing content. Should be placed before geom layers.

Usage

```
annotate_panel_background(
  xmin = -Inf,
  xmax = Inf,
  ymin = -Inf,
  ymax = Inf,
  fill = NULL,
  alpha = 1,
  colour = NULL,
  linewidth = NULL,
  linetype = 0,
  layout = NULL
)
```

Arguments

`xmin`, `xmax` Left and right edges of the rectangle in data coordinates. Defaults to `-Inf` and `Inf`. Use `I()` for normalised coordinates (0-1). May be a vector for multiple rectangles. Bounds may be mixed freely, e.g. `xmin = I(0.5), xmax = Inf` fills from 50% to the right panel edge.

`ymin`, `ymax` Bottom and top edges of the rectangle in data coordinates. Defaults to `-Inf` and `Inf`. Use `I()` for normalised coordinates (0-1). May be a vector for multiple rectangles.

`fill`	Fill colour. Defaults to the `panel.background` fill from the set theme, falling back to `"white"`. May be a vector the same length as the bounds to style each rectangle individually.
`alpha`	Opacity. Defaults to `1` (fully opaque). May be a vector.
`colour`	Border colour. Defaults to the resolved `fill` value, giving a seamless border. May be a vector.
`linewidth`	Inherits from `panel.border` in the set theme. Supports `rel()`. May be a vector.
`linetype`	Border linetype. Defaults to `0` (none). May be a vector.
`layout`	Controls which panels the annotation appears in. `NULL` (default) repeats in all panels. An integer targets a specific panel. `"fixed"` repeats in all panels ignoring faceting variables. See `ggplot2::layer()` for full details.

Value

A list containing annotation layers.

`annotate_panel_grid` *Annotate panel gridlines*

Description

Draws gridlines at specified positions, with style defaults taken from the `panel.grid.major` element of the set theme. Crop bounds (`xmin`, `xmax`, `ymin`, `ymax`) both filter which lines are drawn and control how far they run across the panel.

Usage

```
annotate_panel_grid(
  xintercept = NULL,
  yintercept = NULL,
  xmin = -Inf,
  xmax = Inf,
  ymin = -Inf,
  ymax = Inf,
  colour = NULL,
  linewidth = NULL,
  linetype = NULL,
  layout = NULL
)
```

Arguments

`xintercept`	One or more x positions for vertical gridlines, in data coordinates or wrapped in `I()` for normalised panel coordinates (npc). May be a vector.
`yintercept`	One or more y positions for horizontal gridlines, in data coordinates or wrapped in `I()` for normalised panel coordinates (npc). May be a vector.

xmin, xmax	Left and right crop bounds. Vertical gridlines outside [xmin, xmax] are not drawn; horizontal gridlines run only from xmin to xmax. Defaults to -Inf and Inf (full panel). Use I() for normalised coordinates (npc). Note: filtering (removing lines outside the range) only works when both the crop bound and the intercept are in data coordinates. npc bounds affect extent only.
ymin, ymax	Bottom and top crop bounds. Horizontal gridlines outside [ymin, ymax] are not drawn; vertical gridlines run only from ymin to ymax. Defaults to -Inf and Inf (full panel). Use I() for normalised coordinates (npc). Note: filtering only works when both the crop bound and the intercept are in data coordinates. npc bounds affect extent only.
colour	Inherits from panel.grid.major in the set theme. May be a vector the same length as the total number of lines.
linewidth	Inherits from panel.grid.major in the set theme. Supports rel(). May be a vector the same length as the total number of lines.
linetype	Inherits from panel.grid.major in the set theme. May be a vector the same length as the total number of lines.
layout	Controls which panels the annotation appears in. NULL (default) repeats in all panels. An integer targets a specific panel. "fixed" repeats in all panels ignoring faceting variables. See ggplot2::layer() for full details.

Value

A list of ggplot2 annotation layers.

---

annotate_panel_shade *Annotate a shaded panel region*

Description

A convenience wrapper around annotate_panel_background() with a smart shade default which blends the panel background fill with jumble::slate at 25% opacity with no border. Should be placed before geom layers.

Usage

```
annotate_panel_shade(
  xmin = -Inf,
  xmax = Inf,
  ymin = -Inf,
  ymax = Inf,
  fill = NULL,
  alpha = 0.2,
  colour = "transparent",
  linewidth = NULL,
  linetype = 1,
  layout = NULL
)
```

Arguments

xmin, xmax	Left and right edges of the rectangle in data coordinates. Defaults to -Inf and Inf. Use I() for normalised coordinates (0-1). May be a vector for multiple rectangles. Bounds may be mixed freely, e.g. xmin = I(0.5), xmax = Inf fills from 50% to the right panel edge.
ymin, ymax	Bottom and top edges of the rectangle in data coordinates. Defaults to -Inf and Inf. Use I() for normalised coordinates (0-1). May be a vector for multiple rectangles.
fill	Fill colour.
alpha	Opacity. Defaults to 0.2. May be a vector.
colour	Border colour. Defaults to "transparent". May be a vector.
linewidth	Inherits from panel.border in the set theme. Supports rel(). May be a vector.
linetype	Border linetype. Defaults to 1. May be a vector.
layout	Controls which panels the annotation appears in. NULL (default) repeats in all panels. An integer targets a specific panel. "fixed" repeats in all panels ignoring faceting variables. See ggplot2::layer() for full details.

Value

A list containing annotation layers.

---

annotate_reference_line

Annotate a reference line

Description

Draws one or more reference lines within the panel, with style defaults taken from the axis.line element of the set theme.

Usage

```
annotate_reference_line(
  xintercept = NULL,
  yintercept = NULL,
  colour = NULL,
  linewidth = NULL,
  linetype = "dashed",
  arrow = NULL,
  layout = NULL
)
```

Arguments

xintercept	One or more x positions for vertical reference lines, in data coordinates or wrapped in I() for normalised panel coordinates (npc). May be a vector; each value produces a separate line.
yintercept	One or more y positions for horizontal reference lines, in data coordinates or wrapped in I() for normalised panel coordinates (npc). May be a vector; each value produces a separate line.
colour	Inherits from axis.line in the set theme. May be a vector the same length as the total number of lines.
linewidth	Inherits from axis.line in the set theme. Supports rel(). May be a vector the same length as the total number of lines.
linetype	Defaults to "dashed". May be a vector the same length as the total number of lines.
arrow	A grid::arrow() specification, or a list the same length as the total number of lines. Must use list() not c() when supplying multiple values. E.g. grid::arrow(angle = 15, length = unit(1.5, "mm"), type = "closed").
layout	Controls which panels the annotation appears in. NULL (default) repeats in all panels. An integer targets a specific panel. "fixed" repeats in all panels ignoring faceting variables. See ggplot2::layer() for full details.

Details

The arrow (if any) points in the positive direction by default — rightward for xintercept lines, upward for yintercept lines.

Value

A list of ggplot2 annotation layers.

---

guide_sec_axis_text *Guide optimised for secondary axis text annotations*

Description

A wrapper around ggplot2::guide_axis() that defaults to making transparent ticks and lines while preserving text, making it ideal for annotation labels.

Usage

```
guide_sec_axis_text(..., theme = NULL)
```

Arguments

...	Additional arguments passed to ggplot2::guide_axis(), such as title, check.overlap, or angle.
theme	A theme object to style the secondary axis.

Value

A guide object to be used in a scale's guide argument or within sec_axis_text().

---

sec_axis_text *Secondary axis for text annotations*

Description

Secondary axis for text annotations

Usage

```
sec_axis_text(
  breaks = function(x) mean(x),
  labels = ggplot2::waiver(),
  name = NULL,
  guide = guide_sec_axis_text(),
  ...
)
```

Arguments

breaks	A function or numeric vector giving the break position(s) used to anchor the text. Defaults to \(x) mean(x), which places a single label at the midpoint of the scale limits for continuous scales.
labels	One of: • A character vector of labels, the same length as breaks • A function that takes break positions as input and returns labels If left as ggplot2::waiver(), labels are derived from the break positions and may be numeric.
name	The name of the secondary axis. Use ggplot2::waiver() to derive the name from the primary axis, or NULL (default) for no name.
guide	A guide object used to render the axis. Defaults to guide_sec_axis_text(), which makes transparent ticks and lines.
...	Additional arguments passed to ggplot2::dup_axis().

Value

A AxisSecondary object for use in the sec.axis argument of scale_x_continuous() or scale_y_continuous().

Index

annotate_axis_bracket, 2
annotate_axis_line, 3
annotate_axis_text, 4
annotate_axis_ticks, 6
annotate_panel_background, 7
annotate_panel_grid, 8
annotate_panel_shade, 9
annotate_reference_line, 10

ggplot2::dup_axis(), *12*
ggplot2::guide_axis(), *11*
ggplot2::layer(), *3–5*, *7–11*
ggplot2::waiver(), *12*
grid::arrow(), *4*, *6*, *11*
guide_sec_axis_text, 11

I(), *2, 3*, *5–11*

sec_axis_text, 12