

# Package ‘ggfittext’

July 22, 2025

**Title** Fit Text Inside a Box in 'ggplot2'

**Version** 0.10.2

**Description** A 'ggplot2' extension to fit text into a box by growing, shrinking or wrapping the text.

**Depends** R (>= 3.6)

**License** GPL-2

**LazyData** true

**Imports** grid (>= 3.1), stringi (>= 1.1.2), shades (>= 1.3.1), gridtext  
(>= 0.1.4), ggplot2 (>= 2.2.1), cli (>= 3.6.1)

**RoxygenNote** 7.3.1

**URL** <https://wilcox.org/ggfittext/>

**BugReports** <https://github.com/wilcox/ggfittext/issues/>

**Suggests** knitr, rmarkdown, testthat (>= 3.0.0), vdiffr, spelling

**VignetteBuilder** knitr

**Encoding** UTF-8

**Language** en-GB

**Config/testthat/edition** 3

**NeedsCompilation** no

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**Repository** CRAN

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|           |                                       |
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| altitudes | <i>Some craft and their altitudes</i> |
|-----------|---------------------------------------|

---

**Description**

Some craft and their altitudes

**Usage**

altitudes

**Format**

A data frame with 4 rows and 2 variables:

**craft** the name of the craft

**altitude** the craft’s normal cruising altitude in metres

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|         |                                          |
|---------|------------------------------------------|
| animals | <i>Some animals and their attributes</i> |
|---------|------------------------------------------|

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**Description**

Some animals and their attributes

**Usage**

animals

**Format**

A data frame with 6 rows and 4 variables:

**animal** the name of the animal

**type** the type of animal

**flies** whether the animal can fly

**mass** the average mass of the animal in grams

---

animals\_rich*Some animals and their attributes, in rich text*

---

**Description**

Some animals and their attributes, in rich text

**Usage**

animals\_rich

**Format**

A data frame with 6 rows and 4 variables:

**animal** the name of the animal, in rich text

**type** the type of animal

**flies** whether the animal can fly

**mass** the average mass of the animal in grams

---

beverages*The compositions of some espresso-based beverages*

---

**Description**

The compositions of some espresso-based beverages

**Usage**

beverages

**Format**

A data frame with 6 rows and 3 variables:

**beverage** the name of the beverage

**ingredient** the ingredient

**proportion** the proportion of a cup to fill with the ingredient

---

|                |                                                                        |
|----------------|------------------------------------------------------------------------|
| beverages_rich | <i>The compositions of some espresso-based beverages, in rich text</i> |
|----------------|------------------------------------------------------------------------|

---

### Description

The compositions of some espresso-based beverages, in rich text

### Usage

```
beverages_rich
```

### Format

A data frame with 6 rows and 3 variables:

**beverage** the name of the beverage

**ingredient** the ingredient, in rich text

**proportion** the proportion of a cup to fill with the ingredient

---

|               |                                                  |
|---------------|--------------------------------------------------|
| geom_bar_text | <i>A 'ggplot2' geom to fit text inside a box</i> |
|---------------|--------------------------------------------------|

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### Description

geom\_fit\_text() shrinks, grows and wraps text to fit inside a defined box. geom\_bar\_text() is a convenience wrapper around geom\_fit\_text() for labelling bar plots generated with geom\_col() and geom\_bar().

### Usage

```
geom_bar_text(
  mapping = NULL,
  data = NULL,
  stat = "identity",
  position = "identity",
  na.rm = FALSE,
  show.legend = NA,
  inherit.aes = TRUE,
  padding.x = grid::unit(1, "mm"),
  padding.y = grid::unit(1, "mm"),
  min.size = 8,
  place = NULL,
  outside = NULL,
  grow = FALSE,
  reflow = FALSE,
```

```

    hjust = NULL,
    vjust = NULL,
    fullheight = NULL,
    width = NULL,
    height = NULL,
    formatter = NULL,
    contrast = NULL,
    rich = FALSE,
    ...
)

geom_fit_text(
  mapping = NULL,
  data = NULL,
  stat = "identity",
  position = "identity",
  na.rm = FALSE,
  show.legend = NA,
  inherit.aes = TRUE,
  padding.x = grid::unit(1, "mm"),
  padding.y = grid::unit(1, "mm"),
  min.size = 4,
  place = "centre",
  outside = FALSE,
  grow = FALSE,
  reflow = FALSE,
  hjust = NULL,
  vjust = NULL,
  fullheight = NULL,
  width = NULL,
  height = NULL,
  formatter = NULL,
  contrast = FALSE,
  flip = FALSE,
  rich = FALSE,
  ...
)

```

## Arguments

|                                                            |                                                                                                                        |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| mapping                                                    | ggplot2::aes() object as standard in 'ggplot2'. Note that aesthetics specifying the box must be provided. See Details. |
| data, stat, position, na.rm, show.legend, inherit.aes, ... | Standard geom arguments as for ggplot2::geom_text().                                                                   |
| padding.x, padding.y                                       | Horizontal and vertical padding around the text, expressed in grid::unit() objects. Both default to 1 mm.              |
| min.size                                                   | Minimum font size, in points. Text that would need to be shrunk below this size                                        |

|               |                                                                                                                                                                                                                                                                                                                                                                                |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | to fit the box will be hidden. Defaults to 4 pt (8 pt for <code>geom_bar_text()</code> )                                                                                                                                                                                                                                                                                       |
| place         | Where inside the box to place the text. Default is 'centre'; other options are 'topleft', 'top', 'topright', 'right', 'bottomright', 'bottom', 'bottomleft', 'left', and 'center'/'middle' which are both synonyms for 'centre'. For <code>geom_bar_text()</code> , will be set heuristically if not specified.                                                                |
| outside       | If TRUE, text placed in one of 'top', 'right', 'bottom' or 'left' that would need to be shrunk smaller than <code>min.size</code> to fit the box will be drawn outside the box if possible. This is mostly useful for drawing text inside bar/column geoms. Defaults to TRUE for <code>position = "identity"</code> when using <code>geom_bar_text()</code> , otherwise FALSE. |
| grow          | If TRUE, text will be grown as well as shrunk to fill the box. Defaults to FALSE.                                                                                                                                                                                                                                                                                              |
| reflow        | If TRUE, text will be reflowed (wrapped) to better fit the box. Defaults to FALSE.                                                                                                                                                                                                                                                                                             |
| hjust, vjust  | Horizontal and vertical justification of the text. By default, these are automatically set to appropriate values based on place.                                                                                                                                                                                                                                               |
| fullheight    | If TRUE, descenders will be counted when resizing and placing text; if FALSE, only the x-height and ascenders will be counted. The main use for this option is for aligning text at the baseline (FALSE) or preventing descenders from spilling outside the box (TRUE). By default this is set automatically depending on place and grow.                                      |
| width, height | When using x and/or y aesthetics, these set the width and/or height of the box. These should be either <code>grid::unit()</code> objects or numeric values on the x and y scales.                                                                                                                                                                                              |
| formatter     | A function that will be applied to the text before it is drawn. This is useful when using <code>geom_fit_text()</code> in context involving interpolated variables, such as with the 'gganimate' package. <code>formatter</code> will be applied serially to each element in the label column, so it does not need to be a vectorised function.                                |
| contrast      | If TRUE and in combination with a fill aesthetic, the colour of the text will be inverted for better contrast against dark background fills. FALSE by default for <code>geom_fit_text()</code> , set heuristically for <code>geom_bar_text()</code> .                                                                                                                          |
| rich          | If TRUE, text will be formatted with markdown and HTML markup as implemented by <code>gridtext::richtext_grob()</code> . FALSE by default. Rich text cannot be drawn in polar coordinates. Please note that rich text support is <b>experimental</b> and breaking changes are likely                                                                                           |
| flip          | If TRUE, when in polar coordinates 'upside-down' text will be flipped the 'right way up', to enhance readability.                                                                                                                                                                                                                                                              |

## Details

Except where noted, `geom_fit_text()` behaves more or less like `ggplot2::geom_text()`.

There are three ways to define the box in which you want the text to be drawn. The extents of the box on the x and y axes are independent, so any combination of these methods can be used:

1. If the x and/or y aesthetics are used to set the location of the box, the width or height will be set automatically based on the number of discrete values in x and/or y.

2. Alternatively, if `x` and/or `y` aesthetics are used, the width and/or height of the box can be overridden with a `'width'` and/or `'height'` argument. These should be `grid::unit()` objects; if not, they will be assumed to use the native axis scale.
3. The boundaries of the box can be set using the aesthetics `'xmin'` and `'xmax'`, and/or `'ymin'` and `'ymax'`.

If the text is too big for the box, it will be shrunk to fit the box. With `grow = TRUE`, the text will be made to fill the box completely whether that requires shrinking or growing.

`reflow = TRUE` will cause the text to be reflowed (wrapped) to better fit in the box. If the text cannot be made to fit by reflowing alone, it will be reflowed then shrunk to fit the box. Existing line breaks in the text will be respected when reflowing.

`geom_fit_text()` includes experimental support for drawing text in polar coordinates (by adding `coord_polar()` to the plot), however not all features are available when doing so.

### Aesthetics

- `label` (required)
- `(xmin AND xmax) OR x` (required)
- `(ymin AND ymax) OR y` (required)
- `alpha`
- `angle`
- `colour`
- `family`
- `fontface`
- `lineheight`
- `size`

### Examples

```
ggplot2::ggplot(ggplot2::presidential, ggplot2::aes(ymin = start, ymax = end,
  label = name, x = party)) +
  geom_fit_text(grow = TRUE)
```

---

gold

*Robert Frost's poem Nothing Gold Can Stay (1923)*

---

### Description

Robert Frost's poem *Nothing Gold Can Stay* (1923)

### Usage

gold

**Format**

A data frame with 8 rows and 5 variables:

**line** a line from the poem

**xmin** the xmin coordinate with which to draw the line

**xmax** the xmax coordinate with which to draw the line

**ymin** the ymin coordinate with which to draw the line

**ymax** the ymax coordinate with which to draw the line

**linenumber** the line number



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