

Package ‘ggrepel’

February 8, 2016

Version 0.5

Title Repulsive Text and Label Geoms for 'ggplot2'

Description Provides text and label geoms for 'ggplot2' that help to avoid overlapping text labels. Labels repel away from each other and away from the data points.

Depends R (>= 3.0.0), ggplot2 (>= 2.0.0)

Imports grid, Rcpp

Suggests knitr, rmarkdown

VignetteBuilder knitr

License GPL-2

URL <http://github.com/slowkow/ggrepel>

BugReports <http://github.com/slowkow/ggrepel/issues>

RoxygenNote 5.0.1

LinkingTo Rcpp

NeedsCompilation yes

Author Kamil Slowikowski [aut, cre]

Maintainer Kamil Slowikowski <kslowikowski@fas.harvard.edu>

Repository CRAN

Date/Publication 2016-02-08 15:39:34

R topics documented:

| | |
|----------------------------|---|
| GeomLabelRepel | 2 |
| geom_label_repel | 2 |
| ggrepel | 5 |

| | |
|--------------|----------|
| Index | 6 |
|--------------|----------|

| | |
|----------------|-----------------------|
| GeomLabelRepel | <i>GeomLabelRepel</i> |
|----------------|-----------------------|

Description

GeomLabelRepel

GeomTextRepel

| | |
|------------------|---------------------------------------|
| geom_label_repel | <i>Repulsive textual annotations.</i> |
|------------------|---------------------------------------|

Description

`geom_text_repel` adds text directly to the plot. `geom_label_repel` draws a rectangle underneath the text, making it easier to read. The text labels repel away from each other and away from the data points.

Usage

```
geom_label_repel(mapping = NULL, data = NULL, stat = "identity",
  parse = FALSE, ..., box.padding = unit(0.25, "lines"),
  label.padding = unit(0.25, "lines"), point.padding = unit(1e-06, "lines"),
  label.r = unit(0.15, "lines"), label.size = 0.25,
  segment.color = "#666666", segment.size = 0.5, arrow = NULL,
  force = 1, max.iter = 2000, nudge_x = 0, nudge_y = 0, na.rm = FALSE,
  show.legend = NA, inherit.aes = TRUE)
```

```
geom_text_repel(mapping = NULL, data = NULL, stat = "identity",
  parse = FALSE, ..., box.padding = unit(0.25, "lines"),
  point.padding = unit(1e-06, "lines"), segment.color = "#666666",
  segment.size = 0.5, arrow = NULL, force = 1, max.iter = 2000,
  nudge_x = 0, nudge_y = 0, na.rm = FALSE, show.legend = NA,
  inherit.aes = TRUE)
```

Arguments

| | |
|---------|--|
| mapping | Set of aesthetic mappings created by <code>aes</code> or <code>aes_</code> . If specified and <code>inherit.aes = TRUE</code> (the default), is combined with the default mapping at the top level of the plot. You only need to supply mapping if there isn't a mapping defined for the plot. |
| data | A data frame. If specified, overrides the default data frame defined at the top level of the plot. |
| stat | The statistical transformation to use on the data for this layer, as a string. |
| parse | If TRUE, the labels will be parsed into expressions and displayed as described in <code>?plotmath</code> |

| | |
|-------------------------------|---|
| ... | other arguments passed on to layer . There are three types of arguments you can use here: <ul style="list-style-type: none"> • Aesthetics: to set an aesthetic to a fixed value, like <code>color = "red"</code> or <code>size = 3</code>. • Other arguments to the layer, for example you override the default stat associated with the layer. • Other arguments passed on to the stat. |
| <code>box.padding</code> | Amount of padding around bounding box. Defaults to <code>unit(0.25, "lines")</code> . |
| <code>label.padding</code> | Amount of padding around label. Defaults to 0.25 lines. |
| <code>point.padding</code> | Amount of padding around labeled point. Defaults to <code>unit(0, "lines")</code> . |
| <code>label.r</code> | Radius of rounded corners. Defaults to 0.15 lines. |
| <code>label.size</code> | Size of label border, in mm. |
| <code>segment.color</code> | Color of the line segment connecting the data point to the text label. Defaults to #666666. |
| <code>segment.size</code> | Width of segment, in mm. |
| <code>arrow</code> | specification for arrow heads, as created by arrow |
| <code>force</code> | Force of repulsion between overlapping text labels. Defaults to 1. |
| <code>max.iter</code> | Maximum number of iterations to try to resolve overlaps. Defaults to 2000. |
| <code>nudge_x, nudge_y</code> | Horizontal and vertical adjustments to nudge the starting position of each text label. |
| <code>na.rm</code> | If FALSE (the default), removes missing values with a warning. If TRUE silently removes missing values. |
| <code>show.legend</code> | logical. Should this layer be included in the legends? NA, the default, includes if any aesthetics are mapped. FALSE never includes, and TRUE always includes. |
| <code>inherit.aes</code> | If FALSE, overrides the default aesthetics, rather than combining with them. This is most useful for helper functions that define both data and aesthetics and shouldn't inherit behaviour from the default plot specification, e.g. borders . |

Details

These geoms are based on [geom_text](#) and [geom_label](#). See the documentation for those functions for more details. Differences from those functions are noted here.

Text labels have height and width, but they are physical units, not data units. The amount of space they occupy on that plot is not constant in data units: when you resize a plot, labels stay the same size, but the size of the axes changes. Currently, the text labels will not be repositioned upon resizing a plot. This may change in future releases.

geom_label_repel

Currently `geom_label_repel` does not support the `rot` parameter and is considerably slower than `geom_text_repel`. The `fill` aesthetic controls the background colour of the label.

Alignment

The repulsive geoms reposition text labels to avoid overlap, so the following parameters are **not supported**:

- hjust
- vjust
- position
- check_overlap

Examples

```
p <- ggplot(mtcars, aes(wt, mpg, label = rownames(mtcars)))

# Avoid overlaps by repelling text labels
p + geom_text_repel()
# Labels with background
p + geom_label_repel()

## Not run:
p + geom_text_repel(family = "Times New Roman",
  box.padding = unit(0.5, "lines"))

# Add aesthetic mappings
p + geom_text_repel(aes(colour = factor(cyl)))
p + geom_label_repel(aes(fill = factor(cyl)), colour = "white", fontface = "bold")

# Nudge the starting positions
p + geom_text_repel(nudge_x = ifelse(mtcars$cyl == 6, 1, 0),
  nudge_y = ifelse(mtcars$cyl == 6, 8, 0))

# Change the text size
p + geom_text_repel(aes(size = wt))
# Scale height of text, rather than sqrt(height)
p + geom_text_repel(aes(size = wt)) + scale_radius(range = c(3,6))

# You can display expressions by setting parse = TRUE. The
# details of the display are described in ?plotmath, but note that
# geom_text_repel uses strings, not expressions.
p + geom_text_repel(aes(label = paste(wt, "^(", cyl, ")", sep = "")),
  parse = TRUE)

# Add a text annotation
p +
  geom_text_repel() +
  annotate("text", label = "plot mpg vs. wt", x = 2, y = 15, size = 8, colour = "red")

# Add arrows
p +
  geom_point(colour = "red") +
  geom_text_repel(arrow = arrow(length = unit(0.02, "npc")), box.padding = unit(1, "lines"))
```

```
## End(Not run)
```

ggrepel

ggrepel

Description

This package contains extra geoms for **ggplot2**.

Details

Please see the help pages listed below:

- [geom_text_repel](#)
- [geom_label_repel](#)

Also see the vignette for more usage examples:

```
browseVignettes("ggrepel")
```

Please report issues and suggest improvements at Github:

<https://github.com/slowkow/ggrepel>

Index

*Topic **datasets**

GeomLabelRepel, [2](#)

aes, [2](#)

aes_, [2](#)

arrow, [3](#)

borders, [3](#)

geom_label, [3](#)

geom_label_repel, [2](#), [5](#)

geom_text, [3](#)

geom_text_repel, [5](#)

geom_text_repel (geom_label_repel), [2](#)

GeomLabelRepel, [2](#)

GeomTextRepel (GeomLabelRepel), [2](#)

ggrepel, [5](#)

ggrepel-package (ggrepel), [5](#)

layer, [3](#)