Package 'ggspark'

May 13, 2024

Type Package

Title 'ggplot2' Functions to Create Tufte Style Sparklines

Version 0.0.2

Date 2024-05-09

Description Functions to help with creating sparklines in the style of Edward Tufte <https://www.edwardtufte.com/bboard/q-and-a-fetch-msg?msg_id=0001OR&topic_id=1> in 'ggplot2'. It computes ribbon geoms with the interquartile ranges and points and/or labels at the beginning, end, max, and min points.

License GPL (>= 2)

Suggests tinytest, tinysnapshot, rsvg, svglite, ggrepel, fontquiver

Imports ggplot2

Encoding UTF-8

Language en-GB

RoxygenNote 7.2.3

URL https://github.com/marcboschmatas/ggspark

BugReports https://github.com/marcboschmatas/ggspark/issues

NeedsCompilation no

Author Marc Bosch Matas [aut, cre, cph]

Maintainer Marc Bosch Matas <mboschmatas@gmail.com>

Repository CRAN

Date/Publication 2024-05-13 11:43:12 UTC

R topics documented:

---

ggspark-package *'ggplot2' Functions to Create Tufte Style Sparklines*

Description

Functions to help with creating sparklines in the style of Edward Tufte <https://www.edwardtufte.com/bboard/q-and-a-fetch-msg?msg_id=0001OR&topic_id=1> in 'ggplot2'. It computes ribbon geoms with the interquartile ranges and points and/or labels at the beginning, end, max, and min points.

Package Content

Index of help topics:

```
SparkLabels            Sparkline labels or points
ggspark-package        'ggplot2' Functions to Create Tufte Style
                       Sparklines
stat_interquartilerange
                       Interquartile range
```

Maintainer

Marc Bosch Matas <mboschmatas@gmail.com>

Author(s)

Marc Bosch Matas [aut, cre, cph]

SparkLabels *Sparkline labels or points*

Description

stat for points or labels at the start, end, max, and min values of a line. will automatically compute them from x and y aesthetics. can use either geom = "point"

Usage

```
stat_sparklabels(
  mapping = NULL,
  data = NULL,
  geom = "label",
  label_fun = NULL,
  position = "identity",
  show.legend = TRUE,
  inherit.aes = TRUE
)
```

Arguments

mapping	Set of aesthetic mappings created by aes(). If specified and inherit.aes = TRUE (the default), it is combined with the default mapping at the top level of the plot. You must supply mapping if there is no plot mapping.
data	The data to be displayed in this layer. There are three options:
	If NULL, the default, the data is inherited from the plot data as specified in the call to ggplot().
	A data.frame, or other object, will override the plot data. All objects will be fortified to produce a data frame. See fortify() for which variables will be created.
	A function will be called with a single argument, the plot data. The return value must be a data.frame, and will be used as the layer data. A function can be created from a formula (e.g. ~ head(.x, 10)).
geom	either "point", "text", "label", "text_repel", or "label_repel"
label_fun	function to adapt labels (p. ex. round or add suffixes)
position	Position adjustment, either as a string naming the adjustment (e.g. "jitter" to use position_jitter), or the result of a call to a position adjustment function. Use the latter if you need to change the settings of the adjustment.
show.legend	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. It can also be a named logical vector to finely select the aesthetics to display.
inherit.aes	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

This should be used in combination with 'geom_line()' in order to draw sparklines.

Aesthetics

- x
- y

References

Tufte, Edward R. (n.d.) Sparkline theory and practice https://www.edwardtufte.com/bboard/q-and-a-fetch-msg?msg_id=0001OR&topic_id=1

Examples

```
library(ggplot2)

ggplot(airquality, aes(Day, Wind, group = Month)) +
  stat_interquartilerange(geom = "ribbon",
                          show.legend = FALSE) +
  geom_line() +
```

```
scale_y_continuous(limits = c(0, 25)) +
facet_grid(Month~.) +
ggtitle("Daily wind intensity by month in NYC") +
theme_minimal()
```

---

stat_interquartilerange

Interquartile range

Description

stat for geom_ribbon that shows the range between the 1st and 3rd quartile. will automatically compute them from x and y aesthetics.

Usage

```
stat_interquartilerange(
  mapping = NULL,
  data = NULL,
  geom = "ribbon",
  position = "identity",
  show.legend = FALSE,
  inherit.aes = TRUE,
  fill = "gray90"
)
```

Arguments

mapping	Set of aesthetic mappings created by [aes()](). If specified and inherit.aes = TRUE (the default), it is combined with the default mapping at the top level of the plot. You must supply mapping if there is no plot mapping.
data	The data to be displayed in this layer. There are three options:
	If NULL, the default, the data is inherited from the plot data as specified in the call to [ggplot()]().
	A data.frame, or other object, will override the plot data. All objects will be fortified to produce a data frame. See [fortify()]() for which variables will be created.
	A function will be called with a single argument, the plot data. The return value must be a data.frame, and will be used as the layer data. A function can be created from a formula (e.g. ~ head(.x, 10)).
geom	The geometric object to use to display the data, either as a ggproto Geom subclass or as a string naming the geom stripped of the geom_ prefix (e.g. "point" rather than "geom_point")
position	Position adjustment, either as a string naming the adjustment (e.g. "jitter" to use position_jitter), or the result of a call to a position adjustment function. Use the latter if you need to change the settings of the adjustment.

show.legend	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. It can also be a named logical vector to finely select the aesthetics to display.
inherit.aes	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().
fill	fill colour of ribbon

Details

This should be used in combination with 'geom_line()' in order to draw sparklines.

Aesthetics

- x
- y

References

Tufte, Edward R. (n.d.) Sparkline theory and practice https://www.edwardtufte.com/bboard/q-and-a-fetch-msg?msg_id=0001OR&topic_id=1

Examples

```
library(ggplot2)

ggplot(airquality, aes(Day, Wind, group = Month)) +
  stat_interquartilerange(geom = "ribbon",
                          show.legend = FALSE) +
  geom_line() +
  scale_y_continuous(limits = c(0, 25)) +
  facet_grid(Month~.) +
  ggtitle("Daily wind intensity by month in NYC") +
  theme_minimal()
```

Index