

Package ‘ggisotonic’

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Type Package

Title 'ggplot2' Friendly Isotonic or Monotonic Regression Curves

Version 0.1.2

Description Provides `stat_isotonic()` to add weighted univariate isotonic regression curves.

License GPL-3

Encoding UTF-8

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Imports ggplot2 (>= 3.0.0), dplyr (>= 1.0.0), fdrtool (>= 1.2.17),

URL <https://github.com/talegari/ggisotonic>

BugReports <https://github.com/talegari/ggisotonic/issues>

NeedsCompilation no

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stat_isotonic	<i>stat from isotonic regression</i>
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Description

Adds a stat with isotonic or monotonic regression based on ‘fdrtool::monoreg’ with optional weights

Usage

```
stat_isotonic(
  mapping = NULL,
  data = NULL,
  geom = "line",
  position = "identity",
  show.legend = NA,
  inherit.aes = TRUE,
  precision = 4,
  increasing = 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), 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 <code>NULL</code> , the default, the data is inherited from the plot data as specified in the call to <code>ggplot()</code> . A <code>data.frame</code> , or other object, will override the plot data. All objects will be fortified to produce a data frame. See <code>fortify()</code> for which variables will be created. A function will be called with a single argument, the plot data. The return value must be a <code>data.frame</code> , and will be used as the layer data. A function can be created from a formula (e.g. <code>~ head(.x, 10)</code>).
geom	The geometric object to use display the data
position	Position adjustment, either as a string, or the result of a call to a position adjustment function.
show.legend	logical. Should this layer be included in the legends? <code>NA</code> , the default, includes if any aesthetics are mapped. <code>FALSE</code> never includes, and <code>TRUE</code> always includes. It can also be a named logical vector to finely select the aesthetics to display.
inherit.aes	If <code>FALSE</code> , 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. <code>borders()</code> .
precision	Round 'x' with some precision to remove duplicates values

increasing (bool) Whether y increases with x (isotonic)
... Other arguments passed on to `layer()`. These are often aesthetics, used to set an aesthetic to a fixed value, like `colour = "red"` or `size = 3`. They may also be parameters to the paired geom/stat.

Value

Returns a object of class 'gg', 'ggplot'

Examples

```
library("ggplot2")
set.seed(100)
dataset = data.frame(x = sort(runif(1e2)),
                    y = c(rnorm(1e2/2), rnorm(1e2/2, mean = 4)),
                    w = sample(1:3, 1e2, replace = TRUE)
                    )

# plot isotonic regression line
ggplot(dataset, aes(x = x, y = y)) +
  geom_point() +
  stat_isotonic()

# plot weighted isotonic regression line along with facets
ggplot(dataset, aes(x = x, y = y)) +
  geom_point() +
  stat_isotonic(aes(w = w), color = 'red', size = 1.5, show.legend = FALSE) +
  facet_wrap(w ~ .)
```

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