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.
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Description

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

Usage

```r
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 `aes()` or `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 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? `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()`.

- `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**

```r
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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