Package 'ggskewboxplots'

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Title Skew Boxplot Geoms for 'ggplot2'

Version 1.0.0

Description Provides 'ggplot2' extensions for creating skewed boxplots
using several statistical methods (Kimber, 1990 <doi:10.2307/2347808>; Hubert and Vandervieren, 2008 <doi:10.1016/j.csda.2007.11.008>; Adil et al., 2015 <doi:10.18187/pjsor.v11i1.500>; Babura et al., 2017 <d
age implements custom
statistical transformations and geometries to visualize data
distributions with an emphasis on skewness.

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Encoding UTF-8

RoxygenNote 7.3.3

Imports dplyr, ggplot2, rlang, stats, tidyr

Suggests knitr, rmarkdown, gridExtra, waldo, testthat (>= 3.0.0)

Config/testthat/edition 3

VignetteBuilder knitr

Depends R (>= 4.1.0)

NeedsCompilation no

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compute_skew_stats *Compute alternative boxplot statistics*

Description

Compute alternative boxplot statistics

Usage

```
compute_skew_stats(x, method = "tukey", k = 1.5)
```

Arguments

x	A numeric vector
method	Method name ("tukey", "kimber", "hubert", etc.)
k	Tuning parameter (default 1.5)

Value

A list of boxplot stats: ymin, lower, middle, upper, ymax, outliers

geom_skewboxplot *Skewness-Aware Boxplot (ggplot2 layer)*

Description

Draws boxplots using alternative methods for skewness adjustment.

Usage

```
geom_skewboxplot(
  mapping = NULL,
  data = NULL,
  stat = StatSkewBoxplot,
  position = "dodge",
  ...,
  method = "tukey",
  k = 1.5,
  na.rm = FALSE,
  show.legend = NA,
  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)).
stat	The statistical transformation to use on the data for this layer. Defaults to "skewboxplot".
position	A position adjustment to use on the data for this layer. This can be used in various ways, including to prevent overplotting and improving the display. The position argument accepts the following: • The result of calling a position function, such as position_jitter(). This method allows for passing extra arguments to the position. • A string naming the position adjustment. To give the position as a string, strip the function name of the position_ prefix. For example, to use position_jitter(), give the position as "jitter". • For more information and other ways to specify the position, see the layer position documentation.
...	Other arguments passed on to layer()'s params argument. These arguments broadly fall into one of 4 categories below. Notably, further arguments to the position argument, or aesthetics that are required can *not* be passed through .... Unknown arguments that are not part of the 4 categories below are ignored. • Static aesthetics that are not mapped to a scale, but are at a fixed value and apply to the layer as a whole. For example, colour = "red" or linewidth = 3. The geom's documentation has an **Aesthetics** section that lists the available options. The 'required' aesthetics cannot be passed on to the params. Please note that while passing unmapped aesthetics as vectors is technically possible, the order and required length is not guaranteed to be parallel to the input data. • When constructing a layer using a stat_*() function, the ... argument can be used to pass on parameters to the geom part of the layer. An example of this is stat_density(geom = "area", outline.type = "both"). The geom's documentation lists which parameters it can accept. • Inversely, when constructing a layer using a geom_*() function, the ... argument can be used to pass on parameters to the stat part of the layer. An example of this is geom_area(stat = "density", adjust = 0.5). The stat's documentation lists which parameters it can accept.

- The key_glyph argument of layer() may also be passed on through .... This can be one of the functions described as key glyphs, to change the display of the layer in the legend.

method	Skew boxplot method (e.g. "tukey", "hubert", etc.)
k	Tuning parameter (default = 1.5)
na.rm	If FALSE, the default, missing values are removed with a warning. If TRUE, missing values are silently removed.
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().

Value

A ggplot2 layer object that can be added to a ggplot.

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summarise_skewbox *Summarise Skew-Aware Boxplot Stats*

Description

Summarise skewness-aware boxplot statistics

Usage

```
summarise_skewbox(.data, var, method = "tukey", k = 1.5)
```

Arguments

.data	A data frame (preferably grouped)
var	Unquoted numeric column name
method	Method name (e.g. "adil", "hubert", etc.)
k	Tuning parameter (default 1.5)

Value

A tibble with boxplot stats

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