Package ‘ggstar’

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Title Star Layer for ’ggplot2’
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**geom_star**

**Star layer**

**Description**

`geom_star` provides the siogon layer to easily discernible starshapes for ggplot2, you can use it to create scatterplots.

**Usage**

```r
geom_star(
  mapping = NULL,
  data = NULL,
  na.rm = FALSE,
  show.legend = NA,
  inherit.aes = TRUE,
  ...  
)
```

**draw_key**

**Key drawing functions**

**Description**

Each Geom has an associated function that draws the key when the geom needs to be displayed in a legend. These are the options built into ggplot2.

**Usage**

```r
draw_key_star(data, params, size)
```

**Arguments**

- `data` A single row data frame containing the scaled aesthetics to display in this key
- `params` A list of additional parameters supplied to the geom.
- `size` Width and height of key in mm.

**Value**

A grid grob.
**geom_star**

### 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)`).

**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()`.

**...**
Other arguments passed on to `layer`.

### Aesthetics

`geom_star()` understands the following aesthetics (required aesthetics are in bold):

- x
- y
- alpha
- angle
- colour
- fill
- group
- phase
- size
- starshape
- starstroke

Learn more about setting these aesthetics in `vignette("ggplot2-specs")`.

### Author(s)
Shuangbin Xu
Examples

```r
library(ggplot2)
p <- ggplot(iris, aes(x=Sepal.Length,
y=Sepal.Width,
                      starshape=Species)) +
  geom_star(size=4)
p
```

Description

Create your own discrete scale

Usage

```r
scale_starshape_manual(values, ...)
```

Arguments

- `values`: a set of aesthetic values to map data values to. If this is a named vector, then the values will be matched based on the names. If unnamed, values will be matched in order (usually alphabetical) with the limits of the scale. Any data values that don’t match will be given ‘na.value’.
- `...`: Arguments passed on to `ggplot2::discrete_scale`
- `scale_name`: The name of the scale that should be used for error messages associated with this scale.
- `palette`: A palette function that when called with a single integer argument (the number of levels in the scale) returns the values that they should take (e.g., `scales::hue_pal()`).
- `name`: The name of the scale. Used as the axis or legend title. If `waiver()`, the default, the name of the scale is taken from the first mapping used for that aesthetic. If `NULL`, the legend title will be omitted.
- `breaks`: One of:
  - `NULL` for no breaks
  - `waiver()` for the default breaks (the scale limits)
  - A character vector of breaks
  - A function that takes the limits as input and returns breaks as output
- `labels`: One of:
  - `NULL` for no labels
  - `waiver()` for the default labels computed by the transformation object
  - A character vector giving labels (must be same length as `breaks`)
  - A function that takes the breaks as input and returns labels as output
limits A character vector that defines possible values of the scale and their order.

na.translate Unlike continuous scales, discrete scales can easily show missing values, and do so by default. If you want to remove missing values from a discrete scale, specify na.translate = FALSE.

na.value If na.translate = TRUE, what value aesthetic value should missing be displayed as? Does not apply to position scales where NA is always placed at the far right.

drop Should unused factor levels be omitted from the scale? The default, TRUE, uses the levels that appear in the data; FALSE uses all the levels in the factor.

guide A function used to create a guide or its name. See guides() for more information.

super The super class to use for the constructed scale

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scale_starshape Scales for starshapes, aka glyphs

**Description**

'scale_starshape' maps discrete variables to six easily discernible starshapes. If you have more than 6 levels, you will get a warning message, and the seventh and subsequence levels will not appear on the plot. Use [scale_starshape_manual()] to supply your own values. You can not map a continuous variable to shape.

**Usage**

scale_starshape(default = TRUE, ...)

**Arguments**

default should the starshapes be default?

... Arguments passed on to ggplot2::discrete_scale

aesthetics The names of the aesthetics that this scale works with.

scale_name The name of the scale that should be used for error messages associated with this scale.

palette A palette function that when called with a single integer argument (the number of levels in the scale) returns the values that they should take (e.g., scales::hue_pal()).

name The name of the scale. Used as the axis or legend title. If waiver(), the default, the name of the scale is taken from the first mapping used for that aesthetic. If NULL, the legend title will be omitted.

breaks One of:

- NULL for no breaks
- waiver() for the default breaks (the scale limits)
- A character vector of breaks
show_starshapes

- A function that takes the limits as input and returns breaks as output
labels
- One of:
  - NULL for no labels
  - waiver() for the default labels computed by the transformation object
  - A character vector giving labels (must be same length as breaks)
  - A function that takes the breaks as input and returns labels as output
limits
- A character vector that defines possible values of the scale and their order.
na.translate
- Unlike continuous scales, discrete scales can easily show missing values, and do so by default. If you want to remove missing values from a discrete scale, specify na.translate = FALSE.
na.value
- If na.translate = TRUE, what value aesthetic value should missing be displayed as? Does not apply to position scales where NA is always placed at the far right.
drop
- Should unused factor levels be omitted from the scale? The default, TRUE, uses the levels that appear in the data; FALSE uses all the levels in the factor.
guide
- A function used to create a guide or its name. See guides() for more information.
super
- The super class to use for the constructed scale

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show_starshapes  

**Show the total star shapes**

### Description

Show the total star shapes

### Usage

show_starshapes(...)

### Arguments

...  

see also theme.

### Value

gg object

### Author(s)

Shuangbin Xu

### Examples

```r
p <- show_starshapes()
p
```
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