

Package ‘ggallin’

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Type Package

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Title Grab Bag of 'ggplot2' Functions

BugReports <https://github.com/shabbychef/ggallin/issues>

Description Extra geoms and scales for 'ggplot2', including `geom_cloud()`, a Normal density cloud replacement for errorbars; transforms `ssqrt_trans` and `pseudolog10_trans`, which are loglike but appropriate for negative data; `interp_trans()` and `warp_trans()` which provide scale transforms based on interpolation; and an infix compose operator for scale transforms.

Depends ggplot2 (>= 2.2.1)

Suggests knitr, testthat

Imports scales, grid

RoxygenNote 6.0.1

URL <https://github.com/shabbychef/ggallin>

Collate 'geom_cloud.R' 'ggallin.R' 'transforms.R'

NeedsCompilation no

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ggallin-package *Grab Bag of GGplot2 Functions.*

Description

This package consists of some helper functions for working with ggplot2: geoms, transforms, *etc.*, with no real unifying theme among them.

Legal Mumbo Jumbo

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ggallin-NEWS *News for package 'ggallin':*

Description

News for package 'ggallin'

Version 0.1.1 (2017-10-01)

- submit to CRAN

interp_trans *Interpolation based scale transforms.*

Description

Interpolation based scale transformations. The user supplies x and y (which should be monotonic increasing or decreasing in x) to create a scale transformation based on linear interpolation.

A 'warp' transformation is also supported wherein the user supplies x and w where, after sorting on x , the cumulative sum of w are used as the y in an interpolation transformation. Here w are the rate of increase, or 'weights'.

Usage

```
interp_trans(x=NULL,y=NULL,data=NULL,na.rm=TRUE,breaks=NULL,format=NULL)
```

```
warp_trans(x=NULL,w=NULL,data=NULL,na.rm=TRUE,breaks=NULL,format=NULL)
```

Arguments

<code>x</code>	the x coordinates for linear interpolation.
<code>y</code>	the y coordinates for linear interpolation.
<code>data</code>	A <code>data.frame</code> with columns of x and y for <code>interp_trans</code> or x and w for <code>warp_trans</code> . If <code>data</code> is given, it takes precedence over the given x , y , w .
<code>na.rm</code>	If <code>TRUE</code> , then missing x or y will be removed.
<code>breaks</code>	default breaks function for this transformation. The breaks function is applied to the raw data.
<code>format</code>	default format for this transformation. The format is applied to breaks generated to the raw data.
<code>w</code>	the w coordinates for the ‘warp’ interpolation. The cumulative sum of w are computed then fed to the interpolation transform.

Value

A scale transformation object.

Author(s)

Steven E. Pav <shabbychef@gmail.com>

See Also

[trans_new](#).

Examples

```
set.seed(1234)
ggplot(data.frame(x=rnorm(100),y=runif(100)),aes(x=x,y=y)) +
  geom_point() +
  scale_x_continuous(trans=interp_trans(x=seq(-10,10,by=1),y=cumsum(runif(21))))

set.seed(1234)
ggplot(data.frame(x=rnorm(100),y=runif(100)),aes(x=x,y=y)) +
  geom_point() +
  scale_x_continuous(trans=warp_trans(x=seq(-10,10,by=1),w=runif(21)))

# equivalently:
set.seed(1234)
ggplot(data.frame(x=rnorm(100),y=runif(100)),aes(x=x,y=y)) +
  geom_point() +
  scale_x_continuous(trans=warp_trans(data=data.frame(x=seq(-10,10,by=1),w=runif(21))))
```

```
# this is like trans_sqrt:  
set.seed(1234)  
myx <- seq(0,5,by=0.01)  
ggplot(data.frame(x=rnorm(100),y=runif(100)), aes(x=x,y=y)) +  
  geom_point() +  
  scale_y_continuous(trans=interp_trans(x=myx,y=sqrt(myx)))
```

ssqrt_trans

Various scale transforms.

Description

Various scale transformations.

Usage

ssqrt_trans

pseudolog10_trans

Format

An object of class `trans` of length 7.

Details

The available transforms:

- `ssqrt_trans` a signed square root transform appropriate for negative or positive numbers.
- `pseudolog10_trans` an asinh transformation, which is like a logarithm, but appropriate for negative or positive numbers. This transformation was taken from the Win Vector blog, <http://www.win-vector.com/blog/2012/03/modeling-trick-the-signed-pseudo-logarithm/>.

Value

A scale transformation object.

Author(s)

Steven E. Pav <shabbychef@gmail.com>

See Also

[trans_new](#).

<http://www.win-vector.com/blog/2012/03/modeling-trick-the-signed-pseudo-logarithm/>

Examples

```
set.seed(1234)
ggplot(data.frame(x=rnorm(100),y=runif(100)),aes(x=x,y=y)) +
  geom_point() +
  scale_x_continuous(trans=ssqrt_trans)
```

```
set.seed(1234)
ggplot(data.frame(x=rnorm(100),y=runif(100)),aes(x=x,y=y)) +
  geom_point() +
  scale_x_continuous(trans=pseudolog10_trans)
```

%of%*Composition of scale transforms.*

Description

A binary infix operator that allows one to compose together two scale transformations. We should have that the transformation `a` `%of%` `b` first applies `b`, then applies `a` to the results. This is useful for reversing scales, for example, along with other transformations.

Usage

```
a_trans %of% b_trans
```

Arguments

<code>a_trans</code>	a transformation object.
<code>b_trans</code>	a transformation object.

Value

a transformation object that performs `a` on the output of `b`.

Author(s)

Steven E. Pav <shabbychef@gmail.com>

See Also

[trans_new](#).

Examples

```
set.seed(1234)
# compose transformations with %of%:
ggplot(data.frame(x=rnorm(100),y=exp(rnorm(100,mean=-2,sd=4))),aes(x=x,y=y)) +
  geom_point() +
  scale_y_continuous(trans=scales::reverse_trans() %of% scales::log10_trans())
```

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