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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Repository CRAN

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R topics documented:

`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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Author(s)

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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

x	the x coordinates for linear interpolation.
y	the y coordinates for linear interpolation.
data	A data.frame with columns of x and y for interp_trans or x and w for warp_trans. If data is given, it takes precedence over the given x, y, w.
na.rm	If TRUE, then missing x or y will be removed.
breaks	default breaks function for this transformation. The breaks function is applied to the raw data.
format	default format for this transformation. The format is applied to breaks generated to the raw data.
w	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 `atrans %of% btrans` first applies `btrans`, then applies `atrans` to the results. This is useful for reversing scales, for example, along with other transformations.

Usage

```
atrans %of% btrans
```

Arguments

`atrans`	a transformation object.
`btrans`	a transformation object.

Value

a transformation object that perfroms `atrans` on the output of `btrans`.

Author(s)

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See Also

`trans_new`.

Examples

```
set.seed(1234)
# compose transformatins 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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