Package ‘tidyrstats’

June 11, 2025

Type Package

Depends R (>= 4.1.0)

Title Tidy Common R Statistical Functions

Version 0.1.0

Maintainer Brendan Ansell <ansell.b@wehi.edu.au>

Description Provides functions to scale, log-transform and fit linear models within a 'tidyverse'-style R code framework.
Intended to smooth over inconsistencies in output of base R statistical functions, allowing ease of teaching, learning and daily use. Inspired by the tidy principles used in 'broom' Robinson (2017) <doi:10.21105/joss.00341>.

License MIT + file LICENSE

Encoding UTF-8

RoxygenNote 7.3.2

Imports broom, glue, purrr, dplyr, rlang, stringr, stats

Suggests ggplot2, knitr, magrittr, rmarkdown

NeedsCompilation no

Author Brendan Ansell [aut, cre] (ORCID: <https://orcid.org/0000-0003-0297-897X>)

Repository CRAN

Date/Publication 2025-06-11 13:00:02 UTC

Contents

lm_test *Linear Model Testing for Grouped, Nested, or Ungrouped Data*

Description

Applies a linear model to a data frame and returns tidy model summaries. Supports ungrouped, grouped (dplyr::group_by()), and nested (tidyr::nest_by()) input data.

Usage

```
lm_test(input_data, formula)
```

Arguments

input_data	A data frame or tibble. Can be ungrouped, grouped, or nested.
formula	A model formula, either quoted or unquoted (e.g., y ~ x * z , or "y ~ x * z").

Details

Designed to allow seamless 'in-line' chaining to fit linear models to columns of a tibble. Compatible with ungrouped, grouped or nested input. Compatible with native and magrittr pipe. Uses broom::tidy() to extract model summaries.

Value

A tibble with tidy model output sorted by p value, including:

term Model term (e.g., intercept, predictors, interactions)

estimate Estimated coefficient / beta

std.error Standard error of the estimate

statistic t-statistic

p.value p-value for the hypothesis test

If the input is grouped or nested, group identifiers are retained in the output. In the nested case, nested terms are relocated to the left-most column of the tibble.

Examples

```
library(ggplot2)
library(dplyr)

# Ungrouped
mpg |> lm_test( cty ~ hwy * cyl)

# Grouped
mpg |> group_by(class) |> lm_test(cty ~ hwy * cyl)

# Nested
```

```
mpg  |> nest_by(class) |> lm_test(cty ~ hwy * cyl)
```

neg_log *Negative Logarithm (Base 10 by Default)*

Description

Computes the negative logarithm of a numeric input using base 10 by default.

Usage

```
neg_log(x, base = 10)

neglog(x, base = 10)
```

Arguments

x	A numeric vector. Values must be positive.
base	A numeric value specifying the base of the logarithm. Default is 10.

Details

This function returns the negative logarithm of ‘x‘. By default, it uses base 10, but you can specify a different base using the ‘base‘ argument. Designed for quickly transforming p values for statistical analysis.

Value

A numeric vector of negative logarithmic values.

Examples

```
pvals <- 10^runif(10, -15, -1)
neg_log(pvals)
```

scale_this *Scale a numeric vector without converting to a matrix*

Description

This function scales and centres a numeric vector by subtracting the mean and dividing by the standard deviation. Unlike ‘scale()‘, it returns a numeric vector, not a matrix. Note this function does not allow control over centering or scaling.

Usage

```
scale_this(x)
```

Arguments

`x`	A numeric vector.

Value

A numeric vector of scaled values.

Examples

```
iris_dat <- head(iris$Sepal.Length)
scale_this(iris_dat)
scale_this(c(iris_dat, NA))
```

Index