Package 'tidyna'

May 8, 2026

Title NA-Aware Defaults for Common R Functions

Version 0.4.0

Description

Provides drop-in replacements for common R functions (mean(), sum(), sd(), min(), etc.) that default to 'na.rm = TRUE' and issue warnings when missing values are removed. It handles some special cases. The table() default is set to 'useNA = ifany'.

License MIT + file LICENSE

Encoding UTF-8

RoxygenNote 7.3.3

Imports cli (>= 3.0.0)

Suggests testthat (>= 3.0.0), withr

Config/testthat/edition 3

URL https://github.com/statzhero/tidyna

BugReports https://github.com/statzhero/tidyna/issues

NeedsCompilation no

Author Ulrich Atz [aut, cre, cph] (ORCID: <https://orcid.org/0000-0002-1719-3780>)

Maintainer Ulrich Atz <ulrich.atz@unibocconi.it>

Depends R (>= 4.1.0)

Repository CRAN

Date/Publication 2026-01-27 16:40:02 UTC

Contents

correlation-functions 2
extrema-functions 2
logical-functions 4
row-functions 4
summary-functions 5
table-functions 6

Index **8**

correlation-functions *NA-aware Correlation Function*

Description

Drop-in replacement for `cor()` that defaults to `use = "pairwise.complete.obs"`.

Usage

```
cor(
  x,
  y = NULL,
  use = "pairwise.complete.obs",
  method = c("pearson", "kendall", "spearman"),
  ...
)
```

Arguments

`x`	A numeric vector, matrix, or data frame.
`y`	Optional. A numeric vector, matrix, or data frame.
`use`	Method for handling missing values. Default `"pairwise.complete.obs"`.
`method`	Correlation method: "pearson", "kendall", or "spearman".
`...`	Additional arguments passed to `stats::cor()`.

Value

A correlation matrix or single correlation coefficient.

Examples

```
x <- c(1, 2, NA, 4)
y <- c(2, 4, 6, 8)
cor(x, y)
```

extrema-functions *NA-aware Extrema Functions*

Description

Drop-in replacements for `min()`, `max()`, `range()`, `pmax()`, and `pmin()` that default to `na.rm = TRUE`.

Usage

```
min(..., na.rm = TRUE, all_na = NULL)

max(..., na.rm = TRUE, all_na = NULL)

range(..., na.rm = TRUE, all_na = NULL, finite = FALSE)

pmax(..., na.rm = TRUE, all_na = NULL)

pmin(..., na.rm = TRUE, all_na = NULL)
```

Arguments

`...`	Numeric or character arguments.
`na.rm`	Logical. Should missing values be removed? Default `TRUE`.
`all_na`	Character. What to do when all values are NA: `"error"` (default) throws an error, `"base"` returns what base R does with `na.rm = TRUE` (e.g., `Inf` for `min()`, `-Inf` for `max()`), `"na"` returns `NA`. If `NULL`, uses `getOption("tidyna.all_na", "error")`.
`finite`	Logical. If `TRUE`, removes all non-finite values (NA, NaN, Inf, -Inf). Only applies to `range()`. Default `FALSE`.

Value

For `min()` and `max()`, a length-one vector. For `range()`, a length-two vector containing the minimum and maximum. For `pmax()` and `pmin()`, a vector of length equal to the longest input.

Examples

```
x <- c(1, NA, 5, 3)
min(x)
max(x)
range(x)

# Multiple arguments
min(c(5, NA), c(1, 2))

# Parallel max/min
pmax(c(1, 5, 3), c(2, 1, 4))
pmin(c(1, NA, 3), c(NA, NA, 1))

# range with infinite values
y <- c(1, Inf, 3, -Inf)
range(y)
range(y, finite = TRUE)
```

logical-functions *NA-aware Logical Functions*

Description

Drop-in replacements for `any()` and `all()` that default to `na.rm = TRUE`.

Usage

```
any(x, na.rm = TRUE, all_na = NULL, ...)

all(x, na.rm = TRUE, all_na = NULL, ...)
```

Arguments

`x`	A logical vector.
`na.rm`	Logical. Should missing values be removed? Default `TRUE`.
`all_na`	Character. What to do when all values are NA: `"error"` (default) throws an error, `"base"` returns what base R does with `na.rm = TRUE` (`FALSE` for `any()`, `TRUE` for `all()`), `"na"` returns `NA`. If `NULL`, uses `getOption("tidyna.all_na", "error")`.
`...`	Additional arguments passed to the base function.

Value

A single logical value.

Examples

```
x <- c(TRUE, NA, FALSE)
any(x)
all(x)
```

row-functions *NA-aware Row-wise Functions*

Description

Drop-in replacements for `rowMeans()` and `rowSums()` that default to `na.rm = TRUE`. Both return `NA` for rows where ALL values are missing (base `rowMeans()` returns `NaN`, base `rowSums()` returns `0`).

Usage

```
rowMeans(x, na.rm = TRUE, all_na = NULL, dims = 1L, ...)

rowSums(x, na.rm = TRUE, all_na = NULL, dims = 1L, ...)
```

Arguments

x	A numeric matrix or data frame.
na.rm	Logical. Should missing values be removed? Default TRUE.
all_na	Character. What to do when all values are NA: "error" (default) throws an error, "base" returns what base R does with na.rm = TRUE (NaN for rowMeans(), 0 for rowSums()), "na" returns NA. If NULL, uses getOption("tidyna.all_na", "error").
dims	Integer. Number of dimensions to treat as rows.
...	Additional arguments passed to the base function.

Value

A numeric or complex array of suitable size, or a vector if the result is one-dimensional.

Examples

```
mat <- matrix(c(1, NA, 3, NA, NA, NA), nrow = 2, byrow = TRUE)
rowSums(mat)

# Compare to base R:
base::rowSums(mat, na.rm = TRUE)
```

---

summary-functions *NA-aware Summary Functions*

Description

Drop-in replacements for summary functions that default to na.rm = TRUE and warn when missing values are removed.

Usage

```
mean(x, na.rm = TRUE, all_na = NULL, ...)

sum(x, na.rm = TRUE, all_na = NULL, ...)

prod(x, na.rm = TRUE, all_na = NULL, ...)

sd(x, na.rm = TRUE, all_na = NULL, ...)

var(x, na.rm = TRUE, all_na = NULL, ...)

median(x, na.rm = TRUE, all_na = NULL, ...)

quantile(x, na.rm = TRUE, all_na = NULL, ...)
```

Arguments

x	A numeric vector.
na.rm	Logical. Should missing values be removed? Default TRUE.
all_na	Character. What to do when all values are NA: "error" (default) throws an error, "base" returns what base R does with na.rm = TRUE (e.g., NaN for mean(), 0 for sum()), "na" returns NA. If NULL, uses getOption("tidyna.all_na", "error").
...	Additional arguments passed to the base function.

Value

The computed summary statistic.

Examples

```
x <- c(1, 2, NA, 4)
mean(x)

# Suppress warnings
options(tidyna.warn = FALSE)
mean(x)
options(tidyna.warn = TRUE)

# Control all-NA behavior
mean(c(NA, NA), all_na = "na")
```

---

table-functions *NA-aware Table Function*

Description

Drop-in replacement for table() that defaults to useNA = "ifany", showing NA counts when present.

Usage

```
table(..., useNA = "ifany")
```

Arguments

...	Objects to cross-tabulate.
useNA	Whether to include NA values. Default "ifany".

Value

A contingency table of class table.

Examples

```
x <- c("a", "b", NA, "a", NA)
table(x)
```

Index

all *(logical-functions)*, 4
any *(logical-functions)*, 4

cor *(correlation-functions)*, 2
correlation-functions, 2

extrema-functions, 2

logical-functions, 4

max *(extrema-functions)*, 2
mean *(summary-functions)*, 5
median *(summary-functions)*, 5
min *(extrema-functions)*, 2

pmax *(extrema-functions)*, 2
pmin *(extrema-functions)*, 2
prod *(summary-functions)*, 5

quantile *(summary-functions)*, 5

range *(extrema-functions)*, 2
row-functions, 4
rowMeans *(row-functions)*, 4
rowSums *(row-functions)*, 4

sd *(summary-functions)*, 5
sum *(summary-functions)*, 5
summary-functions, 5

table *(table-functions)*, 6
table-functions, 6

var *(summary-functions)*, 5