

Package: mutagen (via r-universe)

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Title Extensions to dplyr's mutate

Version 0.5.0

Description Extensions to dplyr's mutate.

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URL <https://github.com/gvelasq/mutagen>,
<https://gvelasq.github.io/mutagen/>

BugReports <https://github.com/gvelasq/mutagen/issues>

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gen_coldiff	<i>Generate column difference indicator</i>
-------------	---

Description

This function returns a binary indicator of whether any selected columns are different.

Usage

```
gen_coldiff(data, cols, engine = "identical", ...)
```

Arguments

data	A data frame.
cols	<code><tidy-select></code> Columns to search across.
engine	A character vector indicating the function used to test for equality. One of either "identical" for <code>base::identical()</code> or "all.equal" for <code>base::all.equal()</code> .
...	Arguments passed onto the function defined in engine. For example, the tolerance argument can be passed onto <code>base::all.equal()</code> to ignore numeric differences smaller than tolerance.

Value

An integer vector of value integer 1 (1L) for different columns or an integer 0 (0L) for identical (or near-equal) columns.

Examples

```
library(dplyr, warn.conflicts = FALSE)
a <- tibble(
  x = 1:3,
  y = as.double(1:3),
  z = 1.0001:3.0001
)
```

```

gen_coldiff(a, c(x, y))
b <- a %>%
  mutate(
    q = gen_coldiff(., c(x, y)),
    r = gen_coldiff(., c(x, y), engine = "all.equal"),
    s = gen_coldiff(., c(x, z), engine = "all.equal", tolerance = 1e-4),
    t = gen_coldiff(., c(x, z), engine = "all.equal", tolerance = 1e-5)
  )
b

```

gen_colpercent	<i>Generate column percent</i>
----------------	--------------------------------

Description

This function calculates a column percent. The `by` argument calculates column percents within unique categories of grouping columns. The `prop` argument calculates a proportion rather than a percent.

Usage

```
gen_colpercent(data, col, by, prop = FALSE)
```

Arguments

<code>data</code>	A data frame.
<code>col</code>	<code><tidy-select></code> A single column with which to calculate a column percent.
<code>by</code>	An optional character vector of columns to group by.
<code>prop</code>	If TRUE, percent will be shown as a proportion between 0-1 rather than a percent between 0-100. Default is FALSE.

Value

A double vector totaling 100 within `col`. If grouping columns are specified with `by`, the percent for each unique category of grouping columns will total 100 within `col`. If `prop` is specified, a double vector totaling 1 within `col` (or totaling 1 within unique categories of grouping columns specified with `by`).

Examples

```

library(dplyr, warn.conflicts = FALSE)
a <- as_tibble(mtcars)
gen_colpercent(a, gear)
b <-
  a %>%
  select(gear, cyl, carb) %>%
  arrange(gear, cyl, carb) %>%
  mutate(

```

```

    pct1 = gen_colpercent(., gear),
    pct2 = gen_colpercent(., gear, by = "cyl"),
    pct3 = gen_colpercent(., gear, by = c("cyl", "carb")),
    prop1 = gen_colpercent(., gear, prop = TRUE)
  )
b

```

gen_listcol_na

Generate list or list-column with NULLs replaced with NAs

Description

This function takes a list and replaces all NULL values with NA. It is useful for working with list-columns in a data frame.

Usage

```
gen_listcol_na(x)
```

Arguments

x A list or list-column to modify.

Details

Parallelization is supported via `purrr::in_parallel()`.

Value

A list with all NULL values replaced with NA.

Examples

```

library(dplyr, warn.conflicts = FALSE)
a <-
  mtcars %>%
  select(cyl, vs, am) %>%
  slice(1:6) %>%
  as_tibble() %>%
  mutate(listcol = list(NULL, "b", "c", "d", "e", "f"))
glimpse(a)
b <-
  a %>%
  mutate(across(starts_with("listcol"), gen_listcol_na))
glimpse(b)

```

gen_rowall	<i>Generate rowwise match of all values</i>
------------	---

Description

This function performs a rowwise match of all supplied values across columns in a data frame. If all of the row values equal one of the supplied values, this function returns an integer 1 (1L) for that row, otherwise it returns an integer 0 (0L).

Usage

```
gen_rowall(data, cols, values)
```

Arguments

data	A data frame.
cols	<tidy-select> Columns to search across.
values	A list of values to match.

Details

Parallelization is supported via `purrr::in_parallel()`.

Value

A binary integer vector indicating whether all supplied values were matched with an integer 1 (1L), otherwise it returns an integer 0 (0L).

Examples

```
library(dplyr, warn.conflicts = FALSE)
a <- tibble(
  x = 1:3,
  y = rep(NA, 3),
  z = letters[1:3],
  aa = rep(FALSE, 3)
)
val <- list(1, NA, "a", FALSE)
val2 <- list(3, NA, "c", FALSE)
gen_rowall(a, values = val)
b <- a %>%
  mutate(
    q = gen_rowall(., values = val),
    r = gen_rowall(., values = val2)
  )
b
```

gen_rowany	<i>Generate rowwise match of any values</i>
------------	---

Description

This function performs a rowwise match of any supplied values across columns in a data frame. If any of the row values equal one of the supplied values, this function returns an integer 1 (1L) for that row, otherwise it returns an integer 0 (0L).

Usage

```
gen_rowany(data, cols, values)
```

Arguments

data	A data frame.
cols	<tidy-select> Columns to search across.
values	A list of values to match.

Details

Parallelization is supported via `purrr::in_parallel()`.

Value

A binary integer vector indicating whether any supplied values were matched with an integer 1 (1L), otherwise it returns an integer 0 (0L).

Examples

```
library(dplyr, warn.conflicts = FALSE)
a <- tibble(
  x = 1:3,
  y = rep(NA, 3),
  z = letters[1:3],
  aa = rep(FALSE, 3)
)
val <- list(1, NA, "a", FALSE)
val2 <- list(5, NaN, "d", Inf)
gen_rowany(a, values = val)
b <- a %>%
  mutate(
    q = gen_rowany(., values = val),
    r = gen_rowany(., values = val2)
  )
b
```

gen_rowcount	<i>Generate rowwise count of columns matching a set of values</i>
--------------	---

Description

This function performs a rowwise count of columns in a data frame that match a set of supplied values.

Usage

```
gen_rowcount(data, cols, values)
```

Arguments

data	A data frame.
cols	<tidy-select> Columns to search across.
values	A list of values to match.

Details

Parallelization is supported via `purrr::in_parallel()`.

Value

An integer vector with the number of matched values.

Examples

```
library(dplyr, warn.conflicts = FALSE)
a <- tibble(
  x = 1:3,
  y = rep(NA, 3),
  z = letters[1:3],
  aa = rep(FALSE, 3)
)
val <- list(1, NA, "a", FALSE)
gen_rowcount(a, values = val)
gen_rowcount(a, everything(), values = val)
gen_rowcount(a, starts_with(letters[25:26]), values = val)
b <- a %>% mutate(q = gen_rowcount(., values = val))
b
```

gen_rowfirst	<i>Generate rowwise first nonmissing value</i>
--------------	--

Description

This function returns the rowwise first nonmissing value in a data frame.

Usage

```
gen_rowfirst(data, cols)
```

Arguments

data	A data frame.
cols	<tidy-select> Columns to search across.

Details

Parallelization is supported via `purrr::in_parallel()`.

Value

A vector of the rowwise first nonmissing value. The vector's type will be of common type to all rowwise nonmissing values.

Examples

```
library(dplyr, warn.conflicts = FALSE)
a <- tibble(
  x = c(1, NA, 2),
  y = c(NA, 3, NA),
  z = c(4, NA, 5)
)
gen_rowfirst(a)
gen_rowfirst(a, all_of(letters[25:26]))
b <- a %>% mutate(q = gen_rowfirst(.))
b
c <-
  a %>%
  mutate(w = c("a", TRUE, NA), .before = "x") %>%
  mutate(q = gen_rowfirst(.))
c # note that q is of type <chr>
```

gen_rowlast	<i>Generate rowwise last nonmissing value</i>
-------------	---

Description

This function returns the rowwise last nonmissing value in a data frame.

Usage

```
gen_rowlast(data, cols)
```

Arguments

data	A data frame.
cols	<tidy-select> Columns to search across.

Details

Parallelization is supported via `purrr::in_parallel()`.

Value

A vector of the rowwise last nonmissing value. The vector's type will be of common type to all rowwise nonmissing values.

Examples

```
library(dplyr, warn.conflicts = FALSE)
a <- tibble(
  x = c(1, NA, 2),
  y = c(NA, 3, NA),
  z = c(4, NA, 5)
)
gen_rowlast(a)
gen_rowlast(a, all_of(letters[24:25]))
b <- a %>% mutate(q = gen_rowlast(.))
b
c <-
  a %>%
  mutate(aa = c("a", TRUE, NA), .after = "z") %>%
  mutate(q = gen_rowlast(.))
c # note that q is of type <chr>
```

gen_rowmax	<i>Generate rowwise maximum value</i>
------------	---------------------------------------

Description

This function returns the rowwise maximum value in a data frame.

Usage

```
gen_rowmax(data, cols)
```

Arguments

data	A data frame.
cols	<code><tidy-select></code> Columns to search across.

Details

Parallelization is supported via `purrr::in_parallel()`.

Value

A vector of the rowwise maximum value.

Examples

```
library(dplyr, warn.conflicts = FALSE)
a <- tibble(
  x = c(1, NA, 2),
  y = c(NA, 3, NA),
  z = c(4, NA, 5)
)
gen_rowmax(a)
gen_rowmax(a, everything())
gen_rowmax(a, starts_with(letters[24:25]))
b <- a %>% mutate(q = gen_rowmax(.))
b
```

gen_rowmean	<i>Generate rowwise mean</i>
-------------	------------------------------

Description

This function returns the rowwise arithmetic mean value in a data frame.

Usage

```
gen_rowmean(data, cols)
```

Arguments

data	A data frame.
cols	<code><tidy-select></code> Columns to search across.

Details

Parallelization is supported via `purrr::in_parallel()`.

Value

A double vector of the rowwise arithmetic mean value. Missing values are ignored.

Examples

```
library(dplyr, warn.conflicts = FALSE)
a <- tibble(
  x = c(1, NA, 2),
  y = c(NA, 3, NA),
  z = c(4, NA, 5)
)
gen_rowmean(a)
gen_rowmean(a, everything())
gen_rowmean(a, all_of(letters[25:26]))
b <- a %>% mutate(q = gen_rowmean(.))
b
```

gen_rowmedian	<i>Generate rowwise median</i>
---------------	--------------------------------

Description

This function returns the rowwise median value in a data frame.

Usage

```
gen_rowmedian(data, cols)
```

Arguments

data	A data frame.
cols	<code><tidy-select></code> Columns to search across.

Details

Parallelization is supported via `purrr::in_parallel()`.

Value

A double vector of the rowwise median value. Missing values are ignored.

Examples

```
library(dplyr, warn.conflicts = FALSE)
a <- tibble(
  x = c(1, NA, 2),
  y = c(2, 3, 2),
  z = c(4, NA, 5)
)
gen_rowmedian(a)
gen_rowmedian(a, everything())
gen_rowmedian(a, all_of(letters[25:26]))
b <- a %>% mutate(q = gen_rowmedian(.))
b
```

gen_rowmin	<i>Generate rowwise minimum value</i>
------------	---------------------------------------

Description

This function returns the rowwise minimum value in a data frame.

Usage

```
gen_rowmin(data, cols)
```

Arguments

data	A data frame.
cols	<code><tidy-select></code> Columns to search across.

Details

Parallelization is supported via `purrr::in_parallel()`.

Value

A vector of the rowwise minimum value.

Examples

```
library(dplyr, warn.conflicts = FALSE)
a <- tibble(
  x = c(1, NA, 2),
  y = c(NA, 3, NA),
  z = c(4, NA, 5)
)
gen_rowmin(a)
gen_rowmin(a, everything())
gen_rowmin(a, starts_with(letters[25:26]))
b <- a %>% mutate(q = gen_rowmin(.))
b
```

gen_rowmiss	<i>Generate rowwise count of missing values</i>
-------------	---

Description

This function returns the rowwise count of missing values in a data frame.

Usage

```
gen_rowmiss(data, cols)
```

Arguments

data	A data frame.
cols	<code><tidy-select></code> Columns to search across.

Details

Parallelization is supported via `purrr::in_parallel()`.

Value

An integer vector of the rowwise count of missing values.

Examples

```
library(dplyr, warn.conflicts = FALSE)
a <- tibble(
  x = c(1, NA, 2),
  y = c(NA, 3, NA),
  z = c(4, NA, 5)
)
gen_rowmiss(a)
gen_rowmiss(a, all_of(letters[25:26]))
b <- a %>% mutate(q = gen_rowmiss(.))
b
```

gen_rownonmiss	<i>Generate rowwise count of nonmissing values</i>
----------------	--

Description

This function returns the rowwise count of nonmissing values in a data frame.

Usage

```
gen_rownonmiss(data, cols)
```

Arguments

data A data frame.
 cols `<tidy-select>` Columns to search across.

Details

Parallelization is supported via `purrr::in_parallel()`.

Value

An integer vector of the rowwise count of nonmissing values.

Examples

```
library(dplyr, warn.conflicts = FALSE)
a <- tibble(
  x = c(1, NA, 2),
  y = c(NA, 3, NA),
  z = c(4, NA, 5)
)
gen_rownonmiss(a)
gen_rownonmiss(a, all_of(letters[25:26]))
b <- a %>% mutate(q = gen_rownonmiss(.))
b
```

gen_rownth	<i>Generate rowwise nth nonmissing value</i>
------------	--

Description

This function returns the rowwise nth nonmissing value in a data frame.

Usage

```
gen_rownth(data, cols, n)
```

Arguments

data A data frame.
 cols `<tidy-select>` Columns to search across.
 n An integer vector of length 1 that specifies the position of the rowwise nth nonmissing value to search for. A negative integer will index from the end.

Details

Parallelization is supported via `purrr::in_parallel()`.

Value

A vector of the rowwise *n*th nonmissing value. The vector's type will be of common type to all rowwise nonmissing values.

Examples

```
library(dplyr, warn.conflicts = FALSE)
a <- tibble(
  x = c(1, NA, 2),
  y = c(NA, 3, NA),
  z = c(4, NA, 5)
)
gen_rownth(a, n = 1)
gen_rownth(a, n = 2)
gen_rownth(a, all_of(letters[25:26]), n = 1)
b <- a %>% mutate(q = gen_rownth(., n = 1), r = gen_rownth(., n = 2))
b
c <-
  a %>%
  mutate(w = c("a", TRUE, NA), .before = "x") %>%
  mutate(q = gen_rownth(., n = 1), r = gen_rownth(., n = 2))
c # note that q and r are of type <chr>
```

gen_rowsd

Generate rowwise standard deviation

Description

This function returns the rowwise standard deviation in a data frame.

Usage

```
gen_rowsd(data, cols, na.rm = TRUE)
```

Arguments

data	A data frame.
cols	<code><tidy-select></code> Columns to search across. Non-numeric columns are ignored.
na.rm	Logical vector of length one passed onto <code>stats::sd()</code> .

Details

Parallelization is supported via `purrr::in_parallel()`.

If `na.rm` is `TRUE` (the default), missing values are removed. If `na.rm` is `FALSE`, the presence of an `NA` or `NaN` in any row will return `NA` for that row. As per the documentation for `stats::sd()`, the standard deviation of a length one vector is `NA`.

Value

A double vector of the rowwise standard deviation.

Examples

```
library(dplyr, warn.conflicts = FALSE)
a <- tibble(
  x = c(1, NA, 2),
  y = c(NA, 3, NA),
  z = c(4, NA, 5),
  aa = c("a", "b", "c"),
  bb = rep(NA, 3),
  cc = rep(NaN, 3)
)
gen_rowsd(a)
gen_rowsd(a, all_of(letters[25:26]))
b <- a %>% mutate(q = gen_rowsd(.), r = gen_rowsd(., na.rm = FALSE))
b
```

gen_rowsum

Generate rowwise sum

Description

This function returns the rowwise sum in a data frame.

Usage

```
gen_rowsum(data, cols, na.rm = TRUE)
```

Arguments

data	A data frame.
cols	<tidy-select> Columns to sum. Non-numeric columns are ignored.
na.rm	Logical vector of length one passed onto <code>base::sum()</code> .

Details

Parallelization is supported via `purrr::in_parallel()`.

If `na.rm` is `TRUE` (the default), missing values are removed. If `na.rm` is `FALSE`, the presence of an NA or NaN in any row will return NA or NaN for that row.

Value

A vector of the rowwise sum. The vector's type will be of common type to all rowwise numeric values.

Examples

```
library(dplyr, warn.conflicts = FALSE)
a <- tibble(
  x = c(1, NA, 2),
  y = c(NA, 3, NA),
  z = c(4, NA, 5),
  aa = c("a", "b", "c"),
  bb = rep(NA, 3),
  cc = rep(NaN, 3)
)
gen_rowsum(a)
gen_rowsum(a, all_of(letters[25:26]))
b <- a %>% mutate(q = gen_rowsum(.), r = gen_rowsum(., na.rm = FALSE))
b
```

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