# Package: normalize (via r-universe)

August 28, 2024

**Type** Package

**Title** Centering and Scaling of Numeric Data

**Version** 0.1.0

**Description** Provides a simple method for centering and scaling of numeric data. Certain columns or rows can be ignored when normalizing or be normalized jointly.

**License** GPL (>= 3)

**Encoding** UTF-8

**RoxygenNote** 7.2.3

**Suggests** testthat (>= 3.0.0)

**Config/testthat/edition** 3

**Imports** stats

**URL** https://github.com/loelschlaeger/normalize

**BugReports** https://github.com/loelschlaeger/normalize/issues

**Repository** https://loelschlaeger.r-universe.dev

**RemoteUrl** https://github.com/loelschlaeger/normalize

**RemoteRef** HEAD

**RemoteSha** cc4bbea3f658ed279585700a81a18ecc6cc3af12

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normalize                     *Centering and scaling of numeric data*

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### Description

normalize numeric data saved as a `vector`, `matrix`, `data.frame`, or `list` to have zero mean and / or unit variance

### Usage

```
normalize(x, center = TRUE, scale = TRUE, ...)

## S3 method for class 'numeric'
normalize(x, center = TRUE, scale = TRUE, ...)

## S3 method for class 'matrix'
normalize(
  x,
  center = TRUE,
  scale = TRUE,
  byrow = FALSE,
  ignore = integer(),
  jointly = list(),
  ...
)

## S3 method for class 'data.frame'
normalize(
  x,
  center = TRUE,
  scale = TRUE,
  byrow = FALSE,
  ignore = integer(),
  jointly = list(),
  ...
)

## S3 method for class 'list'
normalize(x, center = TRUE, scale = TRUE, ...)
```

### Arguments

| | |
|---|---|
| x | an object to be normalized |
| center | TRUE to normalize to zero mean or FALSE for no centering |
| scale | TRUE to normalize to unit variance or FALSE for no scaling |
| ... | further arguments to be passed to or from other methods |

| byrow | TRUE to normalize row-wise or FALSE to normalize column-wise |
|---|---|
| ignore | an integer vector of column indices (or row indices if byrow = TRUE) to not normalize |
| jointly | a list of disjoint integer vectors of column indices (or row indices if byrow = TRUE) to normalize jointly |

## Value

the normalized input x with the numeric centering and scaling values used (if any) added as attributes "center" and "scale" (ignored columns and rows get centering and scaling values of NA)

## Examples

```
# can normalize numeric vectors, matrices, data.frames, and lists of those
normalize(
  list(
    c(-3, 0, 3),
    matrix(1:12, nrow = 3, ncol = 4),
    data.frame(a = 1:3, b = 4:6, c = 7:9, d = 10:12)
  )
)

# can ignore columns (or rows)
normalize(
  data.frame(a = 1:3, b = c("A", "B", "C"), c = 7:9, d = 10:12),
  ignore = 2
)

# can normalize columns (or rows) jointly
normalize(
  matrix(1:12, nrow = 3, ncol = 4),
  jointly = list(1:2, 3:4)
)
```

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