

Package ‘stackoverflow’

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approxAUC

Approximate AUC

Description

AUC can be computed exactly by sorting the fitted values, which is often computationally slow. Instead, we can approximate the AUC numerically using monte carlo.

Usage

```
approxAUC(y, yhat, n = 1000)
```

Arguments

| | |
|------|-------------------------------|
| y | the actual class labels [0-1] |
| yhat | the predicted probabilities |
| n | number of samples to draw |

Author(s)

[erik](#), Neal Fultz

References

<http://stackoverflow.com/questions/4903092/calculate-auc-in-r>

Examples

```
g <- glm(y~x,data=data.frame(x=1:10,y=1:10))
classMethods(g)
```

approxDirichlet *Approximate CDF of Dirichlet*

Description

A monte-carlo approximation of the Dirichlet CDF.

Usage

```
approxDirichlet(a, t, N = 10000)
```

Arguments

| | |
|---|---------------------------|
| a | Dirichlet parameters |
| t | the proportions |
| N | number of samples to draw |

Author(s)

[Zen](#), Neal Fultz

References

<http://stats.stackexchange.com/questions/57262/implementation-of-dirichlet-cdf>

Examples

```
approxDirichlet(c(1,3,1), c(0.299, 0.528, 0.204))
```

bag *Multi-indicators / "Bag o Words"*

Description

This creates an indicator matrix from several columns.

Usage

```
bag(..., prefix = ".", levels = NULL)
```

Arguments

| | |
|--------|---------------------------------|
| ... | the columns to bag |
| prefix | a prefix for the column names |
| levels | levels shared among all columns |

Value

a n*p indicator matrix

Author(s)

Neal Fultz

References

<https://stackoverflow.com/questions/47055856/search-multiple-columns-for-string-to-set-indicator-v-57381877#57381877>

Examples

```
df2 <- structure(list(Dx1 = c("231", "231", "001", "245", "231", "001",
"231", "001", "231", "001", "001", "245", "001", "231", "245",
"245", "001", "231", "245", "001"), Dx2 = c("001", "001", "001",
"001", "001", "001", "234", "001", "234", "001", "001",
"001", "001", "001", "777", "777", "234", "001", "234"), Dx3 = c("456",
"001", "444", "444", "001", "001", "444", "001", "001",
"444", "001", "444", "456", "456", "444", "444", "456", "001",
"456")), class = "data.frame", row.names = c(NA, -20L))
```

```
Y <- 1:nrow(df2)
m <- lm(Y~bag(Dx1, Dx2, Dx3), df2)
summary(m)
```

`bat_passes`*Bat passes*

Description

Data from a study on the effect of light on bats.

Usage

```
data(bat_passes)
```

Format

A data.frame with 80 observations and 5 variables.

Location Five locations in the study

AI.N Dark or Light condition

Buzzes Count of buzzes per day

Passes Count of passes per day

Date Date of observation

Source

<https://stats.stackexchange.com/q/325334>

References

nausicaa (<https://stats.stackexchange.com/users/190274/nausicaa>), poisson glm to observe whether effects of artificial light on the number of bat passes in each location were significant, URL (version: 2018-03-09): <https://stats.stackexchange.com/q/325334>

Examples

```
data(bat_passes)
head(bat_passes)
```

`bsearch7`*Efficient binary search for character vectors*

Description

Efficient binary search for character vectors

Usage

```
bsearch7(val, tab, L = 1L, H = length(tab))
```

Arguments

| | |
|------------------|-------------------------|
| <code>val</code> | values |
| <code>tab</code> | table to find values in |
| <code>L</code> | lower bound |
| <code>H</code> | upper bound |

Author(s)

Martin Morgan, Neal Fultz

References

<http://stackoverflow.com/questions/20133344/find-closest-value-in-a-vector-with-binary-search/>
and <https://stat.ethz.ch/pipermail/r-help/2011-April/274182.html>

Examples

```
bsearch7(sample(letters, 5000, replace=TRUE), letters)
```

`calcBMI`*Calculate Body Mass Index*

Description

This calculates Body Mass Index

Usage

```
calcBMI(w = 204, f = 6, i = 1)
```

Arguments

| | |
|---|--------------------|
| w | Weight (in pounds) |
| f | Height (feet) |
| i | Height (inches) |

Value

BMI

Author(s)

Ben Bolker

References

<https://stackoverflow.com/questions/16782598/declaring-dynamic-variable-in-r/16782661#16782661>

See Also

[sprintf](#)

Examples

```
calcBMI(199, 5, 9)
```

chunk2

Split a vector into n chunks

Description

Split a vector into n chunks

Usage

```
chunk2(x, n)
```

Arguments

| | |
|---|------------------|
| x | a vector |
| n | number of chunks |

Author(s)

mathheadinclouds, Dis Shishkov

References

<http://stackoverflow.com/questions/3318333/split-a-vector-into-chunks-in-r>

Examples

```
chunk2(1:30, 6)
```

clamp

Clamp a value into a range

Description

Splits paths into folders.

Usage

```
clamp(x, e1, e2 = -e1)
```

Arguments

| | |
|----|-------------------------------------------------|
| x | vector |
| e1 | the first edge |
| e2 | the other edge, defaults to the negation of e1. |

Value

x, with values outside the boundaries replaced with the boundary points.

Author(s)

[josliber](#),

References

<https://stackoverflow.com/questions/32599695/clamp-variable-within-range>

Examples

```
clamp(-10:10, 2, -2)
clamp(-10:10, -2)
clamp(-10:10, 2)
```

| | |
|--------------|---------------------------------------|
| classMethods | <i>List all methods for an object</i> |
|--------------|---------------------------------------|

Description

The built-in `methods()` function will give all available methods for a specified class, or for a specified generic function, but not for an object. Objects can have multiple classes, so this can be complicated to calculate.

Usage

```
classMethods(cl)
```

Arguments

`cl` a vector of class names, or an object

Author(s)

MrFlick

References

<http://stackoverflow.com/questions/23840404/function-to-return-all-s3-methods-applicable-to-an-object>

Examples

```
g <- glm(y~x,data=data.frame(x=1:10,y=1:10))
classMethods(g)
```

| | |
|----------|----------------------------------------|
| coalesce | <i>Replace NAs in parallel vectors</i> |
|----------|----------------------------------------|

Description

Replaces NA elements of `x` with corresponding element of `y`, and NA elements of that with corresponding element from `dots`.

Usage

```
coalesce(x, y, ...)
```

Arguments

x a vector
y replacement values
... further replacement values

Value

x with NAs replaced with y

Changes

Rather than using eagerly evaluating the dot arguments and Reducing over them, instead we use recursion to evaluate them lazily.

Author(s)

[Gregor Thomas](#),

References

<https://stackoverflow.com/a/19254510/986793>

Examples

```
x <- c(1:4, NA, 1:4, NA)
y <- c(1:9, NA)
z <- c(NA, NA, 1:8)
coalesce(x,y,z)
```

Comment

Multi-line Comments

Description

Multi-line Comments

Usage

```
Comment(...)
```

Arguments

... comment, not evaluated.

Author(s)

[Theell, Spacedman](#) Neal Fultz

References

<http://stackoverflow.com/questions/1231195/multiline-comment-workarounds>

Examples

```
Comment( `
# Put anything in here except back-ticks.

api_idea <- function() {
  return TRUE
}

# Just to show api_idea isn't really there...
print( api_idea )

`)
```

copyEnv

Copy objects from one environment to another

Description

Copy objects from one environment to another

Usage

```
copyEnv(from, to, names = ls(from, all.names = TRUE))
```

Arguments

| | |
|-------|--------------------------|
| from | source environment |
| to | target environment |
| names | names of objects to copy |

Author(s)

Neal Fultz

References

<http://stackoverflow.com/a/33465113/986793>

Examples

```
e1 <- list2env(list(a=1, b=2))
e2 <- new.env()
copyEnv(e1, e2)
ls(e2)
```

cor2cov

Back transform correlation matrix to variance-covariance matrix

Description

Compute a variance-covariance matrix from a correlation matrix and standard deviations.

Usage

```
cor2cov(V, sd = sqrt(diag(V)))
```

Arguments

V a variance covariance matrix
sd a vector of standard deviations - if omitted, use the sqrt of the diagonal of V

Value

a variance-covariance matrix

Author(s)

S4M,

References

<https://stackoverflow.com/questions/18740796/generate-covariance-matrix-from-correlation-matrix>

See Also

[cor](#)

Examples

```
stopifnot(all.equal(
  cor2cov(cor(mtcars), sapply(mtcars, sd)),
  cov(mtcars)
))
```

`ddensity`*Distribution methods for density objects*

Description

Density, distribution function, quantile function and random generation from a kernel density estimate (using linear approximation).

Usage`ddensity(x, d)``pdensity(q, d)``qdensity(p, d)``rdensity(n, d)`**Arguments**

`x` a vector

`d` a density object

`q` a vector

`p` a vector of probabilities

`n` number of observations. If `length(n) > 1`, the length is taken to be the number of required

Author(s)

[user295691](#), Neal Fultz

References

<http://stackoverflow.com/questions/32871602/r-generate-data-from-a-probability-density-distribution>

See Also

[density](#)

[approxfun](#)

[rkde](#)

Examples

```
x <- rnorm(100, mean=0:5)
d <- density(x)
r <- rdensity(10000, d)
plot(d)
lines(density(r), new=TRUE, col='blue', lty='dashed')
```

duplicated2*Find duplicates in a vector*

Description

This will find all duplicates in a run, unlike `duplicated` which finds duplicates globally.

Usage

```
duplicated2(x)
```

Arguments

x a vector

Author(s)

Josh O'Brien, Neal Fultz

References

<http://stackoverflow.com/questions/30260507/exclude-subsequent-duplicated-rows-in-r>

Examples

```
duplicated2(c(2,3,3,2,2,3,3,3,3,2,2))
```

flatten2*Flatten a list without type coercion*

Description

Flatten a list without type coercion

Usage

```
flatten2(x, len = 1024)
```

Arguments

x a nested list
len guess of output length

Changed Feb 19, 2015 by njf

Rather than calculating length, preallocate more than needed.

Author(s)

Tommy, Joshua Ulrich, Josh O'Brien, Neal Fultz

References

<http://stackoverflow.com/questions/8139677/how-to-flatten-a-list-to-a-list-without-coercion>

frontier

Find efficient frontier

Description

A predicate that is TRUE if a point is on the efficient frontier.

Usage

```
frontier(...)
```

Arguments

... coordinates to scan

Value

logical vector, TRUE if point is on efficient frontier

Author(s)

Neal Fultz

References

<https://stackoverflow.com/a/36209989/986793>

Examples

```
df <- data.frame(x=rnorm(100), y=rnorm(100))
plot(df)
points(subset(df, frontier(x,y)), col='red', pch=15)
points(subset(df, frontier(-x,y)), col='green', pch=15)
points(subset(df, frontier(x,-y)), col='blue', pch=15)
points(subset(df, frontier(-x,-y)), col='orange', pch=15)
```

horner.poly

Evaluate Polynomial and Rational Functions using Horner's method

Description

Calculate

Usage

```
horner.poly(x, P)
```

```
horner.rational(x, P, Q)
```

Arguments

| | |
|---|--------------------------------------------------------------------------|
| x | a vector |
| P | the coefficients of the polynomial in the numerator, in increasing order |
| Q | the coefficients of the polynomial in the denominator |

Details

$$y = (P_1 + P_2 * x + P_3 * x^2 + \dots) / (Q_1 + Q_2 * x + Q_3 * x^2 + \dots)$$

If the coefficients have zeros as highest powers, those are ignored.

Value

a vector

Author(s)

torvin

References

<https://stackoverflow.com/questions/53256945/evaluate-polynomial-function>

Examples

```
P <- c(1,-2,1)
horner.poly(polyroot(P), P)
```

| | |
|----------------|--------------------------------------------------------------------|
| invinteraction | <i>Split an interaction'ed factor back into seperate variables</i> |
|----------------|--------------------------------------------------------------------|

Description

Inverse of interaction

Usage

```
invinteraction(fac, ..., sep = ".")
```

Arguments

| | |
|-----|-------------------------------|
| fac | the factor to split |
| ... | optional, names for variables |
| sep | the seperator between levels |

Value

a data.frame of factors

Changes

Refactored to process the levels vector, rather than entire factor vector.

Author(s)

[42](#), Neal Fultz

References

<http://stackoverflow.com/a/10521926/986793>

See Also

[interaction](#)

Examples

```
f1 <- gl(2, 3)
f2 <- gl(3, 2)
invinteraction(f1:f2, sep=':')

ppl <- interaction(
  eyes = as.factor(sample(colors(), 10)),
  hair = as.factor(sample(colors(), 10))
)
str(invinteraction(ppl, "eyes", "hair"))
```

| | |
|----------|------------------------------------------|
| invwhich | <i>Convert indices to logical vector</i> |
|----------|------------------------------------------|

Description

Gives a logical vector which is TRUE for the indices provided

Usage

```
invwhich(ix, n = max(if (is.numeric(ix)) ix, length(nm)), nm)
```

Arguments

| | |
|-----------------|----------------------------------------------------------------|
| <code>ix</code> | an vector of indices |
| <code>n</code> | the length of the output vector; defaults to the maximum index |
| <code>nm</code> | (optional) names for the vector |

Value

a logical vector of length `n` and names `nm`

If `nm` is specified, `ix` may be a character vector instead.

Changes

Rather than using a `useNames` logical to copy the names attribute from one vector to another, you may specify names via the `nm` argument.

Author(s)

Nick Sabbe, Neal Fultz

References

<http://stackoverflow.com/a/7661128/986793>

See Also[interaction](#)**Examples**

```
x <- rnorm(50) > 1
ix <- which(x)
all.equal(x, invwhich(ix, 50))

all.equal(
  invwhich(grep('0', state.abb), 50),
  grepl('0', state.abb)
)
```

`logLik.kmeans`*Log-Likelihood for k-means clustering (for calculating AIC and BIC)*

Description

Log-Likelihood for k-means clustering (for calculating AIC and BIC)

Usage

```
## S3 method for class 'kmeans'
logLik(object, ...)
```

Arguments

| | |
|---------------------|-----------------|
| <code>object</code> | a kmeans object |
| <code>...</code> | unused |

Author(s)

Neal Fultz, inspired by Sherry Towers and [Andy Clifton](#),

References

<http://stackoverflow.com/questions/15839774/how-to-calculate-bic-for-k-means-clustering-in-r>

See Also[logLik](#), [AIC](#), [BIC](#)**Examples**

```
c1 <- kmeans(iris[-5], 3)
AIC(c1)
```

| | |
|------|---------------------------------|
| lsos | <i>Improved list of objects</i> |
|------|---------------------------------|

Description

Improved list of objects

Usage

```
lsos(..., n = 10)
```

Arguments

| | |
|-----|--------------------------------|
| ... | to be passed along to internal |
| n | to be given to head |

Author(s)

Dirk Eddebuettel

References

<http://stackoverflow.com/questions/1358003/tricks-to-manage-the-available-memory-in-an-r-session>

| | |
|---------------------|----------------------------------------|
| match.call.defaults | <i>Argument matching with defaults</i> |
|---------------------|----------------------------------------|

Description

This is a version of `match.call` which also includes default arguments.

Usage

```
match.call.defaults(definition = sys.function(sys.parent()),
  call = sys.call(sys.parent()), expand.dots = TRUE,
  envir = parent.frame(2L))
```

Arguments

| | |
|-------------|----------------------------------------------------------------------------------------------------------------|
| definition | a function, by default the function from which <code>match.call</code> is called. See details. |
| call | an unevaluated call to the function specified by <code>definition</code> , as generated by <code>call</code> . |
| expand.dots | logical. Should arguments matching ... in the call be included or left as a ... argument? |
| envir | an environment, from which the ... in call are retrieved, if any. |

Value

An object of class call.

Author(s)

Neal Fultz

References

<http://stackoverflow.com/questions/14397364/match-call-with-default-arguments/>

Examples

```
foo <- function(x=NULL,y=NULL,z=4, dots=TRUE, ...) {  
  match.call.defaults(expand.dots=dots)  
}  
  
foo(4,nugan='hand')  
foo(dots=FALSE,who='ami')
```

Mode

Calculate mode (most common element) of a vector

Description

Calculate mode (most common element) of a vector

Usage

```
Mode(x, ux = unique(x))
```

Arguments

| | |
|----|-----------------------------|
| x | a vector |
| ux | vector of values x may take |

Changes

Factored ux into argument – njf, May 18, 2015

Author(s)

Ken Williams

References

<http://stackoverflow.com/questions/2547402/standard-library-function-in-r-for-finding-the-mode>

`na.dummy`*Handle Missing Values with Fill + Dummy*

Description

Handles missing values by filling in with mean, and adding a dummy variable.

Usage

```
na.dummy(object, ...)
```

```
fix_predvars(object)
```

Arguments

| | |
|---------------------|--------------------------------------------------|
| <code>object</code> | an R object, typically a <code>data.frame</code> |
| <code>...</code> | other arguments (not used) |

Author(s)

Neal Fultz

References

<https://stackoverflow.com/questions/54642599/impute-constant-and-create-missingness-dummy/54757973#54757973>

Examples

```
df <- structure(list(Y = c(3.83, 22.73, 13.85, 14.09, 20.55, 18.51,
17.76, 9.42, 15.88, 27.81), X1 = 1:10, X2 = c(2L, NA, NA, 4L,
8L, 7L, 6L, 1L, 3L, 9L)), .Names = c("Y", "X1", "X2"), row.names = c(NA,
-10L), class = "data.frame")
```

```
(m <- lm(Y~X1+X2, df, na.action = na.dummy))
m2 <- fix_predvars(m)
attr(terms(m2), "predvars")
predict(m2, newdata = data.frame(X1=2,X2=NA_real_))
```

| | |
|-----------|-----------------------------------------|
| parseLDAP | <i>Parse LDAP output into dataframe</i> |
|-----------|-----------------------------------------|

Description

Parse LDAP output into dataframe

Usage

```
parseLDAP(ldapraw)
```

Arguments

ldapraw A length-one character vector containing the raw LDAP output

Value

a data.frame with one row per person

Author(s)

[user3792484](#), rewrite by Neal Fultz

References

<https://stackoverflow.com/questions/22793855/how-do-i-run-a-ldap-query-using-r>

| | |
|---------|-----------------------------------|
| partial | <i>Partially apply a function</i> |
|---------|-----------------------------------|

Description

Simplify a function by setting some arguments to pre-specified values

Usage

```
partial(f, ...)
```

Arguments

f a function
... arguments to capture

Author(s)

[John Silberholz, A Webb](#)

References

<http://stackoverflow.com/questions/32173901/how-to-efficiently-partially-apply-a-function-in-r>,
<https://stackoverflow.com/a/31900149/986793>

See Also

[partial](#)

[Curry](#)

Examples

```
# Example 1:
f <- function(a, b, c, d) a+b+c+d
p <- partial(f, a=2, c=3)
p(b=0, d=1)

# captures a format string for printing out sleep data
labeller <- partial(sprintf, fmt="extra=%3.2f, group=%d, ID=%d")
do.call(labeller, sleep[1, , drop=FALSE])
```

permutations

Generate all distinct permutations of a vector

Description

Generate all distinct permutations of a vector

Usage

```
permutations(x)
```

Arguments

x vector to permute

Value

A matrix of all distinct permutations (by row)

Author(s)

[Museful](#)

References

<https://stackoverflow.com/a/20199902/986793>

Examples

```
permutations(LETTERS[1:4])
```

| | |
|------------|-----------------------------------------------|
| randomRows | <i>Sample rows from a dataframe or matrix</i> |
|------------|-----------------------------------------------|

Description

Sample rows from a dataframe or matrix

Usage

```
randomRows(x, size, replace = FALSE, prob = NULL)
```

Arguments

| | |
|---------|-----------------------------------------------------------------------------------------|
| x | a data frame or matrix |
| size | a non-negative integer giving the number of items to choose. |
| replace | Should sampling be with replacement? |
| prob | A vector of probability weights for obtaining the elements of the vector being sampled. |

Changes

Matched parameters to sample – njf, May 18, 2015

Author(s)

[Spacedman](#)

References

<http://stackoverflow.com/questions/8273313/random-rows-in-dataframe-in-r>

See Also

[sample](#)

[sample_n](#) for dplyr users

readkey *Wait for a keypress*

Description

Wait for a keypress

Usage

```
readkey(prompt = "Press [enter] to continue")
```

Arguments

prompt the text to display

Changed Feb 23, 2015 by njf

prompt may be set by a parameter rather than hard coding it.

Author(s)

[nnn](#), [arulmr](#), Neal Fultz

References

<http://stackoverflow.com/questions/15272916/how-to-wait-for-a-keypress-in-r>

reflect_triangle *Reflect upper/lower triangle across diagonal*

Description

Create a new matrix by copying the lower(upper) triangle to the other half.

Usage

```
reflect_triangle(m, from = c("lower", "upper"))
```

Arguments

m a square matrix
from lower or upper triangle

Value

a symmetric square matrix

Author(s)

Josh O'Brien

References

<https://stackoverflow.com/questions/26166569/copy-upper-triangle-to-lower-triangle-for-several-mat>

Examples

```
x <- matrix(1:9,3,3)
reflect_triangle(x, "lower")
reflect_triangle(x, "upper")
```

replace_null_recursively

Replace NULLs in nested lists

Description

Replace NULLs in nested lists

Usage

```
replace_null_recursively(x, what = NA_character_)
```

Arguments

| | |
|------|---------------|
| x | a nested list |
| what | a value |

Value

x with NULLs replaced with what

Author(s)

shayaa,

References

<https://stackoverflow.com/a/38950427/986793>

| | |
|--------|-------------------------|
| resave | <i>Resave a session</i> |
|--------|-------------------------|

Description

Resave a session

Usage

```
resave(..., list = character(), file)
```

Arguments

| | |
|------|---------------------------------------------------------|
| ... | symbols of objects |
| list | a character vector of object names; unfortunately named |
| file | the file to update |

Author(s)

Neal Fultz and [flodel](#),

References

<http://stackoverflow.com/a/11813377/986793>

See Also

[load](#), [save](#)

| | |
|--------|---------------------------------------|
| rsplit | <i>Recursively split a data.frame</i> |
|--------|---------------------------------------|

Description

When there are multiple factors to split by, Base R `split` returns a flattened structure by splitting on the interaction of all factors. `rsplit` instead returns a nested list-of-lists.

Usage

```
rsplit(x, by, drop = FALSE)
```

Arguments

| | |
|------|---------------------------|
| x | a data.frame or vector |
| by | a data.frame of factors |
| drop | drop unused factor levels |

Value

a nested list of dataframes, split by each element of by
Inspired by, but different from the below

Author(s)

Neal Fultz

References

<https://stackoverflow.com/questions/47802545/converting-data-frame-into-deeply-nested-list/47802935#47802935>

sincos

sin/cos pairs for modeling

Description

Compute the sin and cos of x.

Usage

```
sincos(x, period = 168/2/pi)
```

Arguments

| | |
|--------|--------------------------------|
| x | a vector |
| period | a scalar, which x is scaled by |

Value

a matrix containing a `_sin` and `_cos` column

Author(s)

Neal Fultz

References

<https://stackoverflow.com/questions/51874305/tuple-variable-in-r-regression-model/54393605#54393605>

Examples

```
data(sunspots)
lm(sunspots~sincos(time(sunspots), 5/pi))
```

split_path

Split paths into folders

Description

Splits paths into folders.

Usage

```
split_path(x)
```

Arguments

x character vector of file paths

Author(s)

James, Neal Fultz for vectorized version

References

<https://stackoverflow.com/questions/29214932/split-a-file-path-into-folder-names-vector/29232017#29232017>

Examples

```
split_path("~/")
```

sprintf_named

sprintf, with named references

Description

This converts named references in a format string (marked by curly braces), and passes through to `sprintf`.

Usage

```
sprintf_named(fmt, ...)
```

Arguments

fmt a character vector of format strings, each of up to 8192 bytes.
... values to be interpolated, optionally with names.

Value

a character vector.

Author(s)

Neal Fultz

References

<https://stackoverflow.com/questions/17475803/sprintf-format-strings-reference-by-name/55423080#55423080>

See Also

[sprintf](#)

Examples

```
sprintf_named("%{HIA}s!!! %{RYLAH}s", RYLAH="Rock You Like a Hurricane", HIA="Here I Am")
```

stackoverflow

Stack Overflow's Greatest Hits

Description

The stackoverflow package consists of helper functions collected from StackOverflow.com, a question and answer site for professional and enthusiast programmers.

References

<http://stackoverflow.com>, <https://github.com/nfultz/stackoverflow>

strReverse

Reverse each string of a vector

Description

A function which will reverse every string in a vector of strings.

Usage

```
strReverse(x)
```

Arguments

x a character vector

Author(s)

Josh O'Brien

References

<https://stackoverflow.com/questions/13612967/how-to-reverse-a-string-in-r>

Examples

```
strReverse(c("abc", "Statistics"))
```

| | |
|----------------|-----------------------------------------------|
| substituteExpr | <i>Substitute on an expression in a value</i> |
|----------------|-----------------------------------------------|

Description

If expr's value is an expression, substitute in any variables bound in env.

Usage

```
substituteExpr(expr, env)
```

Arguments

| | |
|------|----------------------------------|
| expr | an expression value |
| env | an environment or a list object. |

Details

Differs in that substitute uses expr's expression and not value.

Author(s)

G. Grothendieck

References

<https://stackoverflow.com/questions/47780150/use-variable-in-r-substitute/986793>

See Also

[substitute](#)

Examples

```
a <- expression(z = y + x + 2)
substituteExpr(a, list(x=4))
```

| | |
|--------|----------------------------------|
| t.list | <i>Transpose a list-of-lists</i> |
|--------|----------------------------------|

Description

For a nested list x , returns another nested list y such that $x[[a]][[b]] == y[[b]][[a]]$ for all indices in the original list.

Usage

```
## S3 method for class 'list'  
t(x)
```

Arguments

x a list of lists

Details

Occasionally, sparse matrices are represented this way.

Author(s)

[zerweck](#), Neal Fultz

References

<https://stackoverflow.com/questions/45734380/transpose-nested-list>

See Also

[transpose](#) and [transpose](#)

| | |
|-------------|------------------------|
| Tarone.test | <i>Tarone's Z Test</i> |
|-------------|------------------------|

Description

Tests the goodness of fit of the binomial distribution.

Usage

```
Tarone.test(N, M)
```

Arguments

| | |
|---|--------|
| N | Trials |
| M | Counts |

Value

a htest object

Author(s)

Ben O'Neill

References

<https://stats.stackexchange.com/a/410376/6378> and R. E. TARONE, Testing the goodness of fit of the binomial distribution, Biometrika, Volume 66, Issue 3, December 1979, Pages 585–590, <https://doi.org/10.1093/biomet/66.3.585>

Examples

```
#Generate example data
N <- c(30, 32, 40, 28, 29, 35, 30, 34, 31, 39)
M <- c( 9, 10, 22, 15,  8, 19, 16, 19, 15, 10)
Tarone.test(N, M)
```

| | |
|---------------|---------------------------------------|
| trim_trailing | <i>Strip leading / trailing zeros</i> |
|---------------|---------------------------------------|

Description

Removes value from rightmost/leftmost elements of a vector.

Usage

```
trim_trailing(x, value = 0)
```

```
trim_leading(x, value = 0)
```

Arguments

| | |
|-------|-------------------------|
| x | a vector |
| value | a value to strip from x |

Value

a new vector, with values at the right removed

Author(s)

Neal Fultz

References<https://stackoverflow.com/questions/24009982/remove-zeros-in-the-start-and-end-of-a-vector/>**Examples**

```
trim_leading(c(0,0,0,0,1:5))
```

| | |
|----------------|----------------------------------|
| unique_columns | <i>Remove duplicated columns</i> |
|----------------|----------------------------------|

Description

Drops duplicated columns from a data.frame (or other list-like object).

Usage

```
unique_columns(df)
```

Arguments

df a data.frame

Value

data.frame without duplicated columns

Author(s)

akrun

References<https://stackoverflow.com/a/58475153/986793>**Examples**

```
df <- data.frame(a=1:10, b=1:10, c=2:11)
unique_columns(df)
```

| | |
|---------|------------------------|
| unscale | <i>Reverse a scale</i> |
|---------|------------------------|

Description

Computes $x = sz+c$, which is the inverse of $z = (x - c)/s$ provided by the scale function.

Usage

```
unscale(z, center = attr(z, "scaled:center"), scale = attr(z,
  "scaled:scale"))
```

Arguments

| | |
|--------|-------------------------------------------------------------------------------|
| z | a numeric matrix(like) object |
| center | either NULL or a numeric vector of length equal to the number of columns of z |
| scale | either NULL or a numeric vector of length equal to the number of columns of z |

Author(s)

Neal Fultz

References

<https://stackoverflow.com/questions/10287545/backtransform-scale-for-plotting/46840073>

See Also

[scale](#)

Examples

```
mtcs <- scale(mtcars)

all.equal(
  unscale(mtcs),
  as.matrix(mtcars),
  check.attributes=FALSE
)

oldSeed <- .Random.seed
z <- unscale(rnorm(10), 2, .5)
.Random.seed <- oldSeed
x <- rnorm(10, 2, .5)
all.equal(z, x, check.attributes=FALSE)
```

`zip2`*Zip / Enumerate from python*

Description

zip2s together parallel lists into a list-of-lists. It is named zip2 to not collide with utils.

Usage

```
zip2(...)
```

```
enumerate(...)
```

Arguments

... Objects to be zipped together.

Details

enumerate zips together a list with it's indices.

Value

a list of lists

Author(s)

Neal Fultz

References

<https://stackoverflow.com/questions/9281323/zip-or-enumerate-in-r/57564884#57564884>

Examples

```
zip2(1:5,1:10)  
enumerate(1=LETTERS)
```

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