Package 'stackoverflow'

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Type Package

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R topics documented:

`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)
```

---

approxpDirichlet *Approximate CDF of Dirichlet*

Description

A monte-carlo approximation of the Dirichlet CDF.

Usage

```
approxpDirichlet(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

```
approxpDirichlet(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-va
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", "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", "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

Al.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

val	values
tab	table to find values in
L	lower bound
H	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 *List all methods for an object*

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-obj

Examples

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

coalesce *Replace NAs in parallel vectors*

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)

Thell, 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 ommitted, 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-distributio

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

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

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

Value

a vector

Author(s)

torvin

References

https://stackoverflow.com/questions/53256945/evaluate-polynominal-function

Examples

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

`invinteraction` *Split an interaction'ed factor back into seperate variables*

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 *Convert indices to logical vector*

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

ix	an vector of indices
n	the length of the output vector; defaults to the maximum index
nm	(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('O', state.abb), 50),
  grepl('O', 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

object	a kmeans object
...	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

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

lsos *Improved list of objects*

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 Eddelbuettel

References

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

match.call.defaults *Argument matching with defaults*

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 match.call is called. See details.
call	an unevaluated call to the function specified by definition, as generated by call.
expand.dots	ogical. 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

object	an R object, typically a data.frame
...	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 *Parse LDAP output into dataframe*

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 *Partially apply a function*

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` *Sample rows from a dataframe or matrix*

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-matr

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 *Resave a session*

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 *Recursivly split a data.frame*

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 *Substitute on an expression in a value*

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 *Transpose a list-of-lists*

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 *Tarone's Z Test*

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 *Strip leading / trailing zeros*

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 *Remove duplicated columns*

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 *Reverse a scale*

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(l=LETTERS)
```

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