Package 'radiant.data'

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Title Business Analytics using R and Shiny

Version 0.5.1

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Description A platform-independent browser-
based interface for business analytics in R, based on the Shiny package.

Depends R (>= 3.2.0),
magrittr (>= 1.5),
ggplot2 (>= 2.0.0),
lubridate (>= 1.5.0),
tidyr (>= 0.4.1),
dplyr (>= 0.5),

Imports broom (>= 0.4.0),
car (>= 2.1.1),
gridExtra (>= 2.0.0),
knitr (>= 1.13),
rmarkdown(>= 0.9.5),
markdown (>= 0.7.7),
pryr (>= 0.1.2),
shiny (>= 0.13.2),
jsonlite (>= 0.9.17),
shinyAce (>= 0.2.1),
psych (>= 1.5.8),
DT (>= 0.1.55),
readr (>= 0.2.2),
scales (>= 0.3.0),
curl (>= 0.9.4),
rstudioapi (>= 0.5),
import (>= 1.1.0),
base64enc,
methods

Suggests devtools (>= 1.8.0),
testthat (>= 0.10.0),
covr (>= 1.2.0)

URL https://github.com/radiant-rstats/radiant, http://vnijs.github.io/radiant/

BugReports https://github.com/radiant-rstats/radiant/issues

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LazyData true

RoxygenNote 5.0.1

R topics documented:

`add_class` *Convenience function to add a class*

Description

Convenience function to add a class

Usage

```
add_class(x, cl)
```

Arguments

`x`	Object
`cl`	Vector of class labels to add

Examples

```
foo <- "some text" %>% add_class("text")
foo <- "some text" %>% add_class(c("text","another class"))
```

`as_character` *Wrapper for as.character*

Description

Wrapper for as.character

Usage

```
as_character(x)
```

Arguments

`x`	Input vector

`as_distance` *Distance in kilometers or miles between two locations based on lat-long Function based on* http://www.movable-type.co.uk/scripts/latlong.html. *Uses the haversine formula*

Description

Distance in kilometers or miles between two locations based on lat-long Function based on http://www.movable-type.co.uk/scripts/latlong.html. Uses the haversine formula

Usage

```
as_distance(lat1, long1, lat2, long2, unit = "km", R = c(km = 6371, miles =
  3959)[[unit]])
```

Arguments

`lat1`	Latitude of location 1
`long1`	Longitude of location 1
`lat2`	Latitude of location 2
`long2`	Longitude of location 2
`unit`	Measure kilometers ("km", default) or miles ("miles")
`R`	Radius of the earth

Value

Distance bewteen two points

Examples

```
as_distance(32.8245525,-117.0951632, 40.7033127,-73.979681, unit = "km")
as_distance(32.8245525,-117.0951632, 40.7033127,-73.979681, unit = "miles")
```

`as_dmy` *Convert input in day-month-year format to date*

Description

Convert input in day-month-year format to date

Usage

```
as_dmy(x)
```

Arguments

`x`	Input variable

Value

Date variable of class Date

Examples

```
as_dmy("1-2-2014")
```

`as_dmy_hm` *Convert input in day-month-year-hour-minute format to date-time*

Description

Convert input in day-month-year-hour-minute format to date-time

Usage

```
as_dmy_hm(x)
```

Arguments

`x`	Input variable

Value

Date-time variable of class Date

Examples

```
as_mdy_hm("1-1-2014 12:15")
```

`as_dmy_hms` *Convert input in day-month-year-hour-minute-second format to date-time*

Description

Convert input in day-month-year-hour-minute-second format to date-time

Usage

```
as_dmy_hms(x)
```

Arguments

`x`	Input variable

Value

Date-time variable of class Date

Examples

```
as_mdy_hms("1-1-2014 12:15:01")
```

`as_duration` *Wrapper for lubridate's as.duration function. Result converted to numeric*

Description

Wrapper for lubridate's as.duration function. Result converted to numeric

Usage

```
as_duration(x)
```

Arguments

x	Time difference

`as_factor` *Wrapper for as.factor*

Description

Wrapper for as.factor

Usage

```
as_factor(x)
```

Arguments

x	Input vector

as_hm *Convert input in hour-minute format to time*

Description

Convert input in hour-minute format to time

Usage

```
as_hm(x)
```

Arguments

x	Input variable

Value

Time variable of class Period

Examples

```
as_hm("12:45")
## Not run:
as_hm("12:45") %>% minute

## End(Not run)
```

as_hms *Convert input in hour-minute-second format to time*

Description

Convert input in hour-minute-second format to time

Usage

```
as_hms(x)
```

Arguments

x	Input variable

Value

Time variable of class Period

Examples

```
as_hms("12:45:00")
## Not run:
as_hms("12:45:00") %>% hour
as_hms("12:45:00") %>% second

## End(Not run)
```

---

as_integer *Convert variable to integer avoiding potential issues with factors*

Description

Convert variable to integer avoiding potential issues with factors

Usage

```
as_integer(x)
```

Arguments

x	Input variable

Value

Integer

Examples

```
as_integer(rnorm(10))
as_integer(letters)
as_integer(5:10 %>% as.factor)
as.integer(5:10 %>% as.factor)
```

---

as_mdy *Convert input in month-day-year format to date*

Description

Convert input in month-day-year format to date

Usage

```
as_mdy(x)
```

Arguments

x	Input variable

Details

Use as.character if x is a factor

Value

Date variable of class Date

Examples

```
as_mdy("2-1-2014")
## Not run:
as_mdy("2-1-2014") %>% month(label = TRUE)
as_mdy("2-1-2014") %>% week
as_mdy("2-1-2014") %>% wday(label = TRUE)

## End(Not run)
```

---

as_mdy_hm *Convert input in month-day-year-hour-minute format to date-time*

Description

Convert input in month-day-year-hour-minute format to date-time

Usage

```
as_mdy_hm(x)
```

Arguments

x	Input variable

Value

Date-time variable of class Date

Examples

```
as_mdy_hm("1-1-2014 12:15")
```

as_mdy_hms — *Convert input in month-day-year-hour-minute-second format to date-time*

Description

Convert input in month-day-year-hour-minute-second format to date-time

Usage

```
as_mdy_hms(x)
```

Arguments

x	Input variable

Value

Date-time variable of class Date

Examples

```
as_mdy_hms("1-1-2014 12:15:01")
```

as_numeric — *Convert variable to numeric avoiding potential issues with factors*

Description

Convert variable to numeric avoiding potential issues with factors

Usage

```
as_numeric(x)
```

Arguments

x	Input variable

Value

Numeric

Examples

```
as_numeric(rnorm(10))
as_numeric(letters)
as_numeric(5:10 %>% as.factor)
as.numeric(5:10 %>% as.factor)
as_numeric(c("1","2"))
```

as_ymd — *Convert input in year-month-day format to date*

Description

Convert input in year-month-day format to date

Usage

```
as_ymd(x)
```

Arguments

x	Input variable

Value

Date variable of class Date

Examples

```
as_ymd("2013-1-1")
```

as_ymd_hm — *Convert input in year-month-day-hour-minute format to date-time*

Description

Convert input in year-month-day-hour-minute format to date-time

Usage

```
as_ymd_hm(x)
```

Arguments

x	Input variable

Value

Date-time variable of class Date

Examples

```
as_ymd_hm("2014-1-1 12:15")
```

as_ymd_hms *Convert input in year-month-day-hour-minute-second format to date-time*

Description

Convert input in year-month-day-hour-minute-second format to date-time

Usage

```
as_ymd_hms(x)
```

Arguments

x	Input variable

Value

Date-time variable of class Date

Examples

```
as_ymd_hms("2014-1-1 12:15:01")
## Not run:
as_ymd_hms("2014-1-1 12:15:01") %>% as.Date
as_ymd_hms("2014-1-1 12:15:01") %>% month
as_ymd_hms("2014-1-1 12:15:01") %>% hour

## End(Not run)
```

avengers *Avengers*

Description

Avengers

Usage

```
data(avengers)
```

Format

A data frame with 7 rows and 4 variables

Details

List of avengers. The dataset is used to illustrate data merging / joining. Description provided in attr(avengers,"description")

center *Center*

Description

Center

Usage

```
center(x)
```

Arguments

x	Input variable

Value

If x is a numberic variable return x - mean(x)

changedata *Change data*

Description

Change data

Usage

```
changedata(dataset, vars = c(), var_names = names(vars))
```

Arguments

dataset	Name of the dataframe to change
vars	New variables to add to the data.frame
var_names	Names for the new variables to add to the data.frame

Value

None

ci_label *Labels for confidence intervals*

Description

Labels for confidence intervals

Usage

```
ci_label(alt = "two.sided", cl = 0.95)
```

Arguments

alt	Type of hypothesis ("two.sided","less","greater")
cl	Confidence level

Value

A character vector with labels for a confidence interval

Examples

```
ci_label("less",.95)
ci_label("two.sided",.95)
ci_label("greater",.9)
```

ci_perc *Values at confidence levels*

Description

Values at confidence levels

Usage

```
ci_perc(dat, alt = "two.sided", cl = 0.95)
```

Arguments

dat	Data
alt	Type of hypothesis ("two.sided","less","greater")
cl	Confidence level

Value

A vector with values at a confidence level

Examples

```
ci_perc(0:100, "less",.95)
ci_perc(0:100, "greater",.95)
ci_perc(0:100, "two.sided",.80)
```

`combinedata` *Combine datasets using dplyr's bind and join functions*

Description

Combine datasets using dplyr's bind and join functions

Usage

```
combinedata(dataset, cmb_dataset, by = "", add = "", type = "inner_join",
  name = "")
```

Arguments

`dataset`	Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant
`cmb_dataset`	Dataset name (string) to combine with 'dataset'. This can be a dataframe in the global environment or an element in an r_data list from Radiant
`by`	Variables used to combine 'dataset' and 'cmb_dataset'
`add`	Variables to add from 'cmb_dataset'
`type`	The main bind and join types from the dplyr package are provided. **inner_join** returns all rows from x with matching values in y, and all columns from x and y. If there are multiple matches between x and y, all match combinations are returned. **left_join** returns all rows from x, and all columns from x and y. If there are multiple matches between x and y, all match combinations are returned. **right_join** is equivalent to a left join for datasets y and x. **full_join** combines two datasets, keeping rows and columns that appear in either. **semi_join** returns all rows from x with matching values in y, keeping just columns from x. A semi join differs from an inner join because an inner join will return one row of x for each matching row of y, whereas a semi join will never duplicate rows of x. **anti_join** returns all rows from x without matching values in y, keeping only columns from x. **bind_rows** and **bind_cols** are also included, as are **intersect**, **union**, and **setdiff**. See http://radiant-rstats.github.io/docs/data/combine.html for further details
`name`	Name for the combined dataset

Details

See http://radiant-rstats.github.io/docs/data/combine.html for an example in Radiant

Value

If list 'r_data' exists the combined dataset is added as 'name'. Else the combined dataset will be returned as 'name'

Examples

```
avengers %>% combinedata(superheroes, type = "bind_cols")
combinedata("avengers", "superheroes", type = "bind_cols")
avengers %>% combinedata(superheroes, type = "bind_rows")
avengers %>% combinedata(superheroes, add = "publisher", type = "bind_rows")
```

---

copy_all *Source all package functions*

Description

Source all package functions

Usage

```
copy_all(.from)
```

Arguments

.from	The package to pull the function from

Details

Equivalent of source with local=TRUE for all package functions. Adapted from functions by smbache, author of the import package. See https://github.com/smbache/import/issues/4 for a discussion. This function will be depracated when (if) it is included in https://github.com/smbache/import

Examples

```
copy_all(radiant.data)
```

---

copy_from *Source for package functions*

Description

Source for package functions

Usage

```
copy_from(.from, ...)
```

Arguments

.from	The package to pull the function from
...	Functions to pull

Details

Equivalent of source with local=TRUE for package functions. Written by smbache, author of the import package. See https://github.com/smbache/import/issues/4 for a discussion. This function will be depracated when (if) it is included in https://github.com/smbache/import

Examples

```
copy_from(radiant.data, getdata)
```

---

cv *Coefficient of variation*

Description

Coefficient of variation

Usage

```
cv(x, na.rm = TRUE)
```

Arguments

x	Input variable
na.rm	If TRUE missing values are removed before calculation

Value

Coefficient of variation

Examples

```
cv(runif (100))
```

---

dfround *Round double in a data.frame to a specified number of decimal places*

Description

Round double in a data.frame to a specified number of decimal places

Usage

```
dfround(tbl, dec = 3)
```

Arguments

tbl	Data.frame
dec	Number of decimal places

Value

Data.frame for viewing

Examples

```
data.frame(x = c("a","b"), y = c(1L, 2L), z = c(-0.0005, 3.1)) %>%
  dfround(dec = 3)
```

---

diamonds *Diamond prices*

Description

Diamond prices

Usage

```
data(diamonds)
```

Format

A data frame with 3000 rows and 10 variables

Details

A sample of 3,000 from the diamonds dataset bundeled with ggplot2. Description provided in attr(diamonds,"description")

---

does_vary *Does a vector have non-zero variability?*

Description

Does a vector have non-zero variability?

Usage

```
does_vary(x)
```

Arguments

x	Input variable

Value

Logical. TRUE is there is variability

Examples

```
summarise_each(diamonds, funs(does_vary)) %>% as.logical
```

`explore` *Explore data*

Description

Explore data

Usage

```
explore(dataset, vars = "", byvar = "", fun = c("mean_rm", "sd_rm"),
  tabfilt = "", tabsort = "", data_filter = "", shiny = FALSE)
```

Arguments

`dataset`	Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant
`vars`	(Numerical) variables to summaries
`byvar`	Variable(s) to group data by before summarizing
`fun`	Functions to use for summarizing
`tabfilt`	Expression used to filter the table. This should be a string (e.g., "Total > 10000")
`tabsort`	Expression used to sort the table (e.g., "-Total")
`data_filter`	Expression entered in, e.g., Data > View to filter the dataset in Radiant. The expression should be a string (e.g., "price > 10000")
`shiny`	Logical (TRUE, FALSE) to indicate if the function call originate inside a shiny app

Details

See http://radiant-rstats.github.io/docs/data/explore.html for an example in Radiant

Value

A list of all variables defined in the function as an object of class explore

See Also

`summary.explore` to show summaries

Examples

```
result <- explore("diamonds", "price:x")
summary(result)
result <- explore("diamonds", c("price","carat"), byvar = "cut", fun = c("n_missing", "skew"))
summary(result)
diamonds %>% explore("price", byvar = "cut", fun = c("length", "n_distinct"))
```

factorizer *Convert character to factors as needed*

Description

Convert character to factors as needed

Usage

```
factorizer(dat, safx = 20)
```

Arguments

dat	Data.frame
safx	Values to levels ratio

Value

Data.frame with factors

filterdata *Filter data with user-specified expression*

Description

Filter data with user-specified expression

Usage

```
filterdata(dat, filt = "")
```

Arguments

dat	Data.frame to filter
filt	Filter expression to apply to the specified dataset (e.g., "price > 10000" if dataset is "diamonds")

Value

Filtered data.frame

find_dropbox *Find a users dropbox directory*

Description

Find a users dropbox directory

Usage

```
find_dropbox(folder = 1)
```

Arguments

folder	If multiple folders are present select which one to use. The first folder listed is used by default.

Value

Path to users personal dropbox directory

flip *Flip the DT table to put Function, Variable, or Group by on top*

Description

Flip the DT table to put Function, Variable, or Group by on top

Usage

```
flip(expl, top = "fun")
```

Arguments

expl	Return value from explore
top	The variable (type) to display at the top of the table ("fun" for Function, "var" for Variable, and "byvar" for Group by. "fun" is the default

Details

See http://radiant-rstats.github.io/docs/data/explore.html for an example in Radiant

See Also

explore to generate summaries

make_expl to create the DT table

Examples

```
result <- explore("diamonds", "price:x") %>% flip("var")

result <- explore("diamonds", "price", byvar = "cut", fun = c("length", "skew")) %>%
  flip("byvar")
```

`formatdf` *Format a data.frame with a specified number of decimal places*

Description

Format a data.frame with a specified number of decimal places

Usage

```
formatdf(tbl, dec = 3, perc = FALSE, mark = "")
```

Arguments

`tbl`	Data.frame
`dec`	Number of decimal places
`perc`	Display numbers as percentages (TRUE or FALSE)
`mark`	Thousand separator

Value

Data.frame for printing

Examples

```
data.frame(x = c("a","b"), y = c(1L, 2L), z = c(-0.0005, 3)) %>%
  formatdf(dec = 3)
data.frame(x = c(1L, 2L), y = c(0.05, 0.8)) %>%
  formatdf(dec = 2, perc = TRUE)
```

`formatnr` *Format a number with a specified number of decimal places, thousand sep, and a symbol*

Description

Format a number with a specified number of decimal places, thousand sep, and a symbol

Usage

```
formatnr(x, sym = "", dec = 2, perc = FALSE, mark = ",")
```

Arguments

x	Number or vector
sym	Symbol to use
dec	Number of decimal places
perc	Display number as a percentage
mark	Thousand separator

Value

Character (vector) in the desired format

Examples

```
formatnr(2000, "$")
formatnr(2000, dec = 4)
formatnr(.05, perc = TRUE)
formatnr(c(.1, .99), perc = TRUE)
formatnr(data.frame(a = c(.1, .99)), perc = TRUE)
formatnr(data.frame(a = 1000), sym = "$", dec = 0)
```

---

getclass *Get variable class*

Description

Get variable class

Usage

```
getclass(dat)
```

Arguments

dat	Dataset to evaluate

Details

Get variable class information for each column in a data.frame

Value

Vector with class information for each variable

Examples

```
getclass(mtcars)
```

getdata *Get data for analysis functions*

Description

Get data for analysis functions

Usage

```
getdata(dataset, vars = "", filt = "", rows = NULL, na.rm = TRUE)
```

Arguments

dataset	Name of the dataframe
vars	Variables to extract from the dataframe
filt	Filter to apply to the specified dataset. For example "price > 10000" if dataset is "diamonds" (default is "")
rows	Select rows in the specified dataset. For example "1:10" for the first 10 rows or "n()-10:n()" for the last 10 rows (default is NULL)
na.rm	Remove rows with missing values (default is TRUE)

Value

Data.frame with specified columns and rows

getsummary *Create data.frame summary*

Description

Create data.frame summary

Usage

```
getsummary(dat, dc = getclass(dat))
```

Arguments

dat	Data.frame
dc	Class for each variable

Details

Used in Radiant's Data > Transform tab

glance *Exporting the glance from broom*

Description

Exporting the glance from broom

indexr *Find index corrected for missing values and filters*

Description

Find index corrected for missing values and filters

Usage

```
indexr(dataset, vars = "", filt = "")
```

Arguments

dataset	Dataset name
vars	Variables to select
filt	Data filter

install_webshot *Install webshot and phantomjs*

Description

Install webshot and phantomjs

Usage

```
install_webshot()
```

inverse *Calculate inverse of a variable*

Description

Calculate inverse of a variable

Usage

```
inverse(x)
```

Arguments

x	Input variable

Value

1/x

is_empty *Is a character variable defined*

Description

Is a character variable defined

Usage

```
is_empty(x, empty = "\\s*")
```

Arguments

x	Character value to evaluate
empty	Indicate what 'empty' means. Default is empty string (i.e., "")

Details

Is a variable NULL or an empty string

Value

TRUE if empty, else FALSE

Examples

```
is_empty("")
is_empty(NULL)
is_empty(NA)
is_empty(c())
is_empty("none", empty = "none")
is_empty("")
is_empty("   ")
is_empty(" something  ")
```

`is_not` *Convenience function for is.null or is.na*

Description

Convenience function for is.null or is.na

Usage

```
is_not(x)
```

Arguments

x	Input

Examples

```
is_not(NA)
is_not(NULL)
is_not(c())
```

`is_string` *Is input a string?*

Description

Is input a string?

Usage

```
is_string(x)
```

Arguments

x	Input

Details

Is input a string

Value

TRUE if string, else FALSE

Examples

```
is_string("   ")
is_string("data")
is_string(c("data","data"))
is_string(NULL)
```

---

iterms *Create a vector of interaction terms*

Description

Create a vector of interaction terms

Usage

```
iterms(vars, nway, sep = ":")
```

Arguments

vars	Variables lables to use
nway	2-way (2) or 3-way (3) interactions labels to create
sep	Separator between variable names (default is :)

Value

Character vector of interaction term labels

Examples

```
paste0("var", 1:3) %>% iterms(2)
paste0("var", 1:3) %>% iterms(3)
paste0("var", 1:3) %>% iterms(2, sep = ".")
```

---

kurtosi *Exporting the kurtosi function from the psych package*

Description

Exporting the kurtosi function from the psych package

level_list *Generate list of levels and unique values*

Description

Generate list of levels and unique values

Usage

```
level_list(dat, ...)
```

Arguments

dat	A data.frame
...	Unquoted variable names to evaluate

Examples

```
data.frame(a = c(rep("a",5),rep("b",5)), b = c(rep(1,5),6:10)) %>% level_list
level_list(mtcars, mpg, cyl)
```

ln *Natural log*

Description

Natural log

Usage

```
ln(x, na.rm = TRUE)
```

Arguments

x	Input variable
na.rm	Remove missing values (default is TRUE)

Value

Natural log of vector

Examples

```
ln(runif(10,1,2))
```

loadcsv *Load a csv file with read.csv and read_csv*

Description

Load a csv file with read.csv and read_csv

Usage

```
loadcsv(fn, .csv = FALSE, header = TRUE, sep = ",", dec = ".",
  saf = TRUE, safx = 20)
```

Arguments

fn	File name string
.csv	Use read.csv instead of read_csv to load file (default is FALSE)
header	Header in file (TRUE, FALSE)
sep	Use , (default) or ; or \t
dec	Decimal symbol. Use . (default) or ,
saf	Convert character variables to factors if (1) there are less than 100 distinct values (2) there are X (see safx) more values than levels
safx	Values to levels ratio

Value

Data.frame with (some) variables converted to factors

loadcsv_url *Load a csv file with from a url*

Description

Load a csv file with from a url

Usage

```
loadcsv_url(csv_url, header = TRUE, sep = ",", dec = ".", saf = TRUE,
  safx = 20)
```

Arguments

csv_url	URL for the csv file
header	Header in file (TRUE, FALSE)
sep	Use , (default) or ; or \t
dec	Decimal symbol. Use . (default) or ,
saf	Convert character variables to factors if (1) there are less than 100 distinct values (2) there are X (see safx) more values than levels
safx	Values to levels ratio

Value

Data.frame with (some) variables converted to factors

`loadr` *Load an rda or rds file and add it to the radiant data list (r_data) if available*

Description

Load an rda or rds file and add it to the radiant data list (r_data) if available

Usage

```
loadr(fn, objname = "")
```

Arguments

`fn`	File name and path as a string. Extension must be either rda or rds
`objname`	Name to use for the data.frame. Defaults to the file name

Value

Data.frame in r_data or in the calling enviroment

`loadrda_url` *Load an rda file from a url*

Description

Load an rda file from a url

Usage

```
loadrda_url(rda_url)
```

Arguments

`rda_url`	URL for the csv file

Value

Data.frame

make_dt *Make a pivot tabel in DT*

Description

Make a pivot tabel in DT

Usage

```
make_dt(pvt, format = "none", perc = FALSE, dec = 3, search = "",
  searchCols = NULL, order = NULL)
```

Arguments

pvt	Return value from pivotr
format	Show Color bar ("color_bar"), Heat map ("heat"), or None ("none")
perc	Display numbers as percentages (TRUE or FALSE)
dec	Number of decimals to show
search	Global search. Used to save and restore state
searchCols	Column search and filter. Used to save and restore state
order	Column sorting. Used to save and restore state

Details

See http://radiant-rstats.github.io/docs/data/pivotr.html for an example in Radiant

See Also

pivotr to create the pivot-table using dplyr

summary.pivotr to print a plain text table

Examples

```
pivotr("diamonds", cvars = "cut") %>% make_dt
pivotr("diamonds", cvars = c("cut","clarity")) %>% make_dt(format = "color_bar")
ret <-  pivotr("diamonds", cvars = c("cut","clarity"), normalize = "total") %>%
   make_dt(format = "color_bar", perc = TRUE)
```

make_expl *Make a tabel of summary statistics in DT*

Description

Make a tabel of summary statistics in DT

Usage

```
make_expl(expl, top = "fun", dec = 3, search = "", searchCols = NULL,
  order = NULL)
```

Arguments

expl	Return value from explore
top	The variable (type) to display at the top of the table ("fun" for Function, "var" for Variable, and "byvar" for Group by
dec	Number of decimals to show
search	Global search. Used to save and restore state
searchCols	Column search and filter. Used to save and restore state
order	Column sorting. Used to save and restore state

Details

See http://radiant-rstats.github.io/docs/data/explore.html for an example in Radiant

See Also

pivotr to create the pivot-table using dplyr

summary.pivotr to print a plain text table

Examples

```
tab <- explore("diamonds", "price:x") %>% make_expl
tab <- explore("diamonds", "price", byvar = "cut", fun = c("length", "skew")) %>%
  make_expl(top = "byvar")
```

make_funs *Make a list of functions-as-formulas to pass to dplyr*

Description

Make a list of functions-as-formulas to pass to dplyr

Usage

```
make_funs(x)
```

Arguments

x	List of functions as strings

Value

List of functions to pass to dplyr in formula form

Examples

```
make_funs(c("mean", "sum_rm"))
```

make_train *Generate a variable used to selected a training sample*

Description

Generate a variable used to selected a training sample

Usage

```
make_train(n = 0.7, nr = 100)
```

Arguments

n	Number (or fraction) of observations to label as training
nr	Number of rows in the dataset

Value

0/1 variables for filtering

Examples

```
make_train(.5, 10)
```

max_rm *Max with na.rm = TRUE*

Description

Max with na.rm = TRUE

Usage

```
max_rm(x)
```

Arguments

x	Input variable

Value

Maximum value

Examples

```
max_rm(runif (100))
```

mean_rm *Mean with na.rm = TRUE*

Description

Mean with na.rm = TRUE

Usage

```
mean_rm(x)
```

Arguments

x	Input variable

Value

Mean value

Examples

```
mean_rm(runif (100))
```

median_rm *Median with na.rm = TRUE*

Description

Median with na.rm = TRUE

Usage

```
median_rm(x)
```

Arguments

x	Input variable

Value

Median value

Examples

```
median_rm(runif (100))
```

min_rm *Min with na.rm = TRUE*

Description

Min with na.rm = TRUE

Usage

```
min_rm(x)
```

Arguments

x	Input variable

Value

Minimum value

Examples

```
min_rm(runif (100))
```

mode_rm *Mode with na.rm = TRUE*

Description

Mode with na.rm = TRUE

Usage

```
mode_rm(x)
```

Arguments

x	Input variable

Value

Mode value

Examples

```
mode_rm(diamonds$cut)
```

mutate_each *Add tranformed variables to a data frame (NSE)*

Description

Add tranformed variables to a data frame (NSE)

Usage

```
mutate_each(tbl, funs, ..., ext = "")
```

Arguments

tbl	Data frame to add transformed variables to
funs	Function(s) to apply (e.g., funs(log))
...	Variables to transform
ext	Extension to add for each variable

Details

Wrapper for dplyr::mutate_each that allows custom variable name extensions

Examples

```
mutate_each(mtcars, funs(log), mpg, cyl, ext = "_log")
```

normalize *Normalize a variable x by a variable y*

Description

Normalize a variable x by a variable y

Usage

```
normalize(x, y)
```

Arguments

x	Input variable
y	Normalizing variable

Value

x/y

n_missing *Number of missing values*

Description

Number of missing values

Usage

```
n_missing(x)
```

Arguments

x	Input variable

Value

number of missing values

Examples

```
n_missing(c("a","b",NA))
```

p05 *5th percentile*

Description

5th percentile

Usage

```
p05(x, na.rm = TRUE)
```

Arguments

x	Input variable
na.rm	If TRUE missing values are removed before calculation

Value

5th percentile

Examples

```
p05(rnorm(100))
```

p10 *10th percentile*

Description

10th percentile

Usage

```
p10(x, na.rm = TRUE)
```

Arguments

x	Input variable
na.rm	If TRUE missing values are removed before calculation

Value

10th percentile

Examples

```
p10(rnorm(100))
```

p25 *25th percentile*

Description

25th percentile

Usage

```
p25(x, na.rm = TRUE)
```

Arguments

x	Input variable
na.rm	If TRUE missing values are removed before calculation

Value

25th percentile

Examples

```
p25(rnorm(100))
```

p75 *75th percentile*

Description

75th percentile

Usage

```
p75(x, na.rm = TRUE)
```

Arguments

x	Input variable
na.rm	If TRUE missing values are removed before calculation

Value

75th percentile

Examples

```
p75(rnorm(100))
```

p90 *90th percentile*

Description

90th percentile

Usage

```
p90(x, na.rm = TRUE)
```

Arguments

x	Input variable
na.rm	If TRUE missing values are removed before calculation

Value

90th percentile

Examples

```
p90(rnorm(100))
```

p95 *95th percentile*

Description

95th percentile

Usage

```
p95(x, na.rm = TRUE)
```

Arguments

x	Input variable
na.rm	If TRUE missing values are removed before calculation

Value

95th percentile

Examples

```
p95(rnorm(100))
```

pivotr *Create a pivot table using dplyr*

Description

Create a pivot table using dplyr

Usage

```
pivotr(dataset, cvars = "", nvar = "None", fun = "mean_rm",
  normalize = "None", tabfilt = "", tabsort = "", data_filter = "",
  shiny = FALSE)
```

Arguments

dataset	Name of the dataframe to change
cvars	Categorical variables
nvar	Numerical variable
fun	Function to apply to numerical variable
normalize	Normalize the table by "row" total,"column" totals, or overall "total"
tabfilt	Expression used to filter the table. This should be a string (e.g., "Total > 10000")
tabsort	Expression used to sort the table (e.g., "-Total")
data_filter	Expression used to filter the dataset. This should be a string (e.g., "price > 10000")
shiny	Logical (TRUE, FALSE) to indicate if the function call originate inside a shiny app

Details

Create a pivot-table. See http://radiant-rstats.github.io/docs/data/pivotr.html for an example in Radiant

Examples

```
result <- pivotr("diamonds", cvars = "cut")$tab
result <- pivotr("diamonds", cvars = c("cut","clarity","color"))$tab
result <- pivotr("diamonds", cvars = "cut:clarity", nvar = "price")$tab
result <- pivotr("diamonds", cvars = "cut", nvar = "price")$tab
result <- pivotr("diamonds", cvars = "cut", normalize = "total")$tab
```

plot.character *Don't try to plot strings*

Description

Don't try to plot strings

Usage

```
## S3 method for class 'character'
plot(x, ...)
```

Arguments

x	A character returned from a function
...	Any additional arguments

plot.pivotr *Plot method for the pivotr function*

Description

Plot method for the pivotr function

Usage

```
## S3 method for class 'pivotr'
plot(x, type = "dodge", perc = FALSE, flip = FALSE,
  shiny = FALSE, custom = FALSE, ...)
```

Arguments

x	Return value from pivotr
type	Plot type to use ("fill" or "dodge" (default))
perc	Use percentage on the y-axis
flip	Flip the axes in a plot (FALSE or TRUE)
shiny	Did the function call originate inside a shiny app
custom	Logical (TRUE, FALSE) to indicate if ggplot object (or list of ggplot objects) should be returned. This opion can be used to customize plots (e.g., add a title, change x and y labels, etc.). See examples and http://docs.ggplot2.org/ for options.
...	further arguments passed to or from other methods

Details

See http://radiant-rstats.github.io/docs/data/pivotr for an example in Radiant

See Also

pivotr to generate summaries

summary.pivotr to show summaries

Examples

```
pivotr("diamonds", cvars = "cut") %>% plot
pivotr("diamonds", cvars = c("cut","clarity")) %>% plot
pivotr("diamonds", cvars = c("cut","clarity","color")) %>% plot
```

---

print.gtable *Print/draw method for grobs produced by gridExtra*

Description

Print/draw method for grobs produced by gridExtra

Usage

```
## S3 method for class 'gtable'
print(x, ...)
```

Arguments

x	a gtable object
...	further arguments passed to or from other methods

Details

Print method for ggplot grobs created using arrangeGrob. Code is based on https://github.com/baptiste/gridextra/blob/master/inst/testing/shiny.R

Value

A plot

---

publishers *Comic publishers*

Description

Comic publishers

Usage

```
data(publishers)
```

Format

A data frame with 3 rows and 2 variables

Details

List of comic publishers from http://stat545-ubc.github.io/bit001_dplyr-cheatsheet.html. The dataset is used to illustrate data merging / joining. Description provided in attr(publishers,"description")

---

radiant.data *radiant.data*

Description

radiant.data

Launch Radiant in the default browser

Usage

```
radiant.data()
```

Details

See http://vnijs.github.io/radiant for documentation and tutorials

---

radiant.data-deprecated *Deprecated function(s) in the radiant.data package*

Description

These functions are provided for compatibility with previous versions of radiant. They will eventually be removed.

Usage

```
dfprint(...)
```

Arguments

...	Parameters to be passed to the updated functions

Details

dfprint is now a synonym for formatdf
nrprint is now a synonym for formatnr

render *Method to render htmlwidgets*

Description

Method to render htmlwidgets

Usage

```
render(object, ...)
```

Arguments

object	Object of relevant class to render
...	Additional arguments

render.datatables *Method to render DT tabels*

Description

Method to render DT tabels

Usage

```
## S3 method for class 'datatables'
render(object, ...)
```

Arguments

object	DT table plot
...	Additional arguments

saver *Save data.frame as an rda or rds file from Radiant*

Description

Save data.frame as an rda or rds file from Radiant

Usage

```
saver(objname, file)
```

Arguments

objname	Name of the data.frame
file	File name and path as a string. Extension must be either rda or rds

Value

Data.frame in r_data

---

sdp_rm *Standard deviation for the population na.rm = TRUE*

Description

Standard deviation for the population na.rm = TRUE

Usage

```
sdp_rm(x)
```

Arguments

x	Input variable

Value

Standard deviation for the population

Examples

```
sdp_rm(rnorm(100))
```

---

sd_rm *Standard deviation with na.rm = TRUE*

Description

Standard deviation with na.rm = TRUE

Usage

```
sd_rm(x, na.rm = TRUE)
```

Arguments

x	Input variable
na.rm	Remove NAs (TRUE or FALSE)

Value

Standard deviation

Examples

```
sd_rm(rnorm(100))
```

serr *Standard error*

Description

Standard error

Usage

```
serr(x, na.rm = TRUE)
```

Arguments

x	Input variable
na.rm	If TRUE missing values are removed before calculation

Value

Standard error

Examples

```
serr(rnorm(100))
```

set_attr *Alias used to add an attribute (from github version of magrittr)*

Description

Alias used to add an attribute (from github version of magrittr)

Usage

```
set_attr()
```

Examples

```
foo <- data.frame(price = 1:5) %>% set_attr("desc", "price set in experiment ...")
```

set_class *Alias used to set the class for analysis function return*

Description

Alias used to set the class for analysis function return

Usage

```
set_class()
```

Examples

```
foo <- function(x) x^2 %>% set_class(c("foo", class(.)))
```

show_duplicated *Show all rows with duplicated values (not just the first or last)*

Description

Show all rows with duplicated values (not just the first or last)

Usage

```
show_duplicated(tbl, ...)
```

Arguments

tbl	Data frame to add transformed variables to
...	Variables used to evaluate row uniqueness

Details

If an entire row is duplicated use "duplicated" to show only one of the duplicated rows. When using a subset of variables to establish uniqueness it may be of interest to show all rows that have (some) duplicate elements

Examples

```
bind_rows(mtcars, mtcars[c(1,5,7),]) %>%
  show_duplicated(mpg, cyl)
bind_rows(mtcars, mtcars[c(1,5,7),]) %>%
  show_duplicated
```

`sig_stars` *Add stars '***' to a data.frame (from broom's 'tidy' function) based on p.values*

Description

Add stars '***' to a data.frame (from broom's 'tidy' function) based on p.values

Usage

```
sig_stars(pval)
```

Arguments

`pval`	Vector of p-values

Details

Add stars to output from broom's 'tidy' function

Value

A vector of stars

Examples

```
sig_stars(c(.0009, .049, .009, .4, .09))
```

`skew` *Exporting the skew function from the psych package*

Description

Exporting the skew function from the psych package

square *Calculate square of a variable*

Description

Calculate square of a variable

Usage

```
square(x)
```

Arguments

x	Input variable

Value

x^2

sshh *Hide warnings and messages and return invisible*

Description

Hide warnings and messages and return invisible

Usage

```
sshh(...)
```

Arguments

...	Inputs to keep quite

Details

Adapted from http://www.onthelambda.com/2014/09/17/fun-with-rprofile-and-customizing-r-startup/

Examples

```
sshh( library(dplyr) )
```

sshhr *Hide warnings and messages and return result*

Description

Hide warnings and messages and return result

Usage

```
sshhr(...)
```

Arguments

...	Inputs to keep quite

Details

Adapted from http://www.onthelambda.com/2014/09/17/fun-with-rprofile-and-customizing-r-startup/

Examples

```
sshhr( library(dplyr) )
```

standardize *Standardize*

Description

Standardize

Usage

```
standardize(x)
```

Arguments

x	Input variable

Value

If x is a numberic variable return center(x) / mean(x)

store *Method to store variables in a dataset in Radiant*

Description

Method to store variables in a dataset in Radiant

Usage

```
store(object, ...)
```

Arguments

object	Object of relevant class that has required information to store
...	Additional arguments

summary.explore *Summary method for the explore function*

Description

Summary method for the explore function

Usage

```
## S3 method for class 'explore'
summary(object, top = "fun", dec = 3, ...)
```

Arguments

object	Return value from explore
top	The variable (type) to display at the top of the table
dec	Number of decimals to show
...	further arguments passed to or from other methods

Details

See http://radiant-rstats.github.io/docs/data/explore.html for an example in Radiant

See Also

explore to generate summaries

Examples

```
result <- explore("diamonds", "price:x")
summary(result)
result <- explore("diamonds", "price", byvar = "cut", fun = c("length", "skew"))
summary(result)
diamonds %>% explore("price:x") %>% summary
diamonds %>% explore("price", byvar = "cut", fun = c("length", "skew")) %>% summary
```

summary.pivotr *Summary method for pivotr*

Description

Summary method for pivotr

Usage

```
## S3 method for class 'pivotr'
summary(object, perc = FALSE, dec = 3, chi2 = FALSE,
  shiny = FALSE, ...)
```

Arguments

object	Return value from pivotr
perc	Display numbers as percentages (TRUE or FALSE)
dec	Number of decimals to show
chi2	If TRUE calculate the chi-square statistic for the (pivot) table
shiny	Did the function call originate inside a shiny app
...	further arguments passed to or from other methods

Details

See http://radiant-rstats.github.io/docs/data/pivotr.html for an example in Radiant

See Also

pivotr to create the pivot-table using dplyr

Examples

```
pivotr("diamonds", cvars = "cut") %>% summary
pivotr("diamonds", cvars = "cut", tabsort = "-n") %>% summary
pivotr("diamonds", cvars = "cut", tabfilt = "n > 700") %>% summary
pivotr("diamonds", cvars = "cut:clarity", nvar = "price") %>% summary
```

sum_rm *Sum with na.rm = TRUE*

Description

Sum with na.rm = TRUE

Usage

```
sum_rm(x)
```

Arguments

x	Input variable

Value

Sum of input values

Examples

```
sum_rm(1:200)
```

---

superheroes *Super heroes*

Description

Super heroes

Usage

```
data(superheroes)
```

Format

A data frame with 7 rows and 4 variables

Details

List of super heroes from http://stat545-ubc.github.io/bit001_dplyr-cheatsheet.html.
The dataset is used to illustrate data merging / joining. Description provided in attr(superheroes,"description")

---

table2data *Create data.frame from a table*

Description

Create data.frame from a table

Usage

```
table2data(dat, freq = tail(colnames(dat), 1))
```

Arguments

dat	Data.frame
freq	Column name with frequency information

Examples

```
data.frame(price = c("$200","$300"), sale = c(10, 2)) %>% table2data
```

tidy *Exporting the tidy from broom*

Description

Exporting the tidy from broom

titanic *Survival data for the Titanic*

Description

Survival data for the Titanic

Usage

```
data(titanic)
```

Format

A data frame with 1043 rows and 10 variables

Details

Survival data for the Titanic. Description provided in attr(titanic,"description")

varp_rm *Variance for the population na.rm = TRUE*

Description

Variance for the population na.rm = TRUE

Usage

```
varp_rm(x)
```

Arguments

x	Input variable

Value

Variance for the population

Examples

```
varp_rm(rnorm(100))
```

var_rm *Variance with na.rm = TRUE*

Description

Variance with na.rm = TRUE

Usage

```
var_rm(x)
```

Arguments

x	Input variable

Value

Variance

Examples

```
var_rm(rnorm(100))
```

viewdata *View data*

Description

View data

Usage

```
viewdata(dataset, vars = "", filt = "", rows = NULL, na.rm = FALSE)
```

Arguments

dataset	Name of the dataframe to change
vars	Variables to show (default is all)
filt	Filter to apply to the specified dataset. For example "price > 10000" if dataset is "diamonds" (default is "")
rows	Select rows in the specified dataset. For example "1:10" for the first 10 rows or "n()-10:n()" for the last 10 rows (default is NULL)
na.rm	Remove rows with missing values (default is FALSE)

Details

View, search, sort, etc. your data

Examples

```
if (interactive()) {
viewdata(mtcars)
viewdata("mtcars")
mtcars %>% viewdata
}
```

`visualize` *Visualize data using ggplot2* http://docs.ggplot2.org/current/

Description

Visualize data using ggplot2 http://docs.ggplot2.org/current/

Usage

```
visualize(dataset, xvar, yvar = "", comby = FALSE, combx = FALSE,
  type = "hist", facet_row = ".", facet_col = ".", color = "none",
  fill = "none", bins = 10, smooth = 1, fun = "mean", check = "",
  axes = "", alpha = 0.5, data_filter = "", shiny = FALSE,
  custom = FALSE)
```

Arguments

`dataset`	Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant
`xvar`	One or more variables to display along the X-axis of the plot
`yvar`	Variable to display along the Y-axis of the plot (default = "none")
`comby`	Combine yvars in plot (TRUE or FALSE, FALSE is the default)
`combx`	Combine xvars in plot (TRUE or FALSE, FALSE is the default)
`type`	Type of plot to create. One of Histogram ('hist'), Density ('density'), Scatter ('scatter'), Line ('line'), Bar ('bar'), or Box-plot ('box')
`facet_row`	Create vertically arranged subplots for each level of the selected factor variable
`facet_col`	Create horizontally arranged subplots for each level of the selected factor variable
`color`	Adds color to a scatter plot to generate a heat map. For a line plot one line is created for each group and each is assigned a different color
`fill`	Group bar, histogram, and density plots by group, each with a different color
`bins`	Number of bins used for a histogram (1 - 50)
`smooth`	Adjust the flexibility of the loess line for scatter plots
`fun`	Set the summary measure for line and bar plots when the X-variable is a factor (default is "mean"). Also used to plot an error bar in a scatter plot when the X-variable is a factor. Options are "mean" and/or "median"
`check`	Add a regression line ("line"), a loess line ("loess"), or jitter ("jitter") to a scatter plot

axes	Flip the axes in a plot ("flip") or apply a log transformation (base e) to the y-axis ("log_y") or the x-axis ("log_x")
alpha	Opacity for plot elements (0 to 1)
data_filter	Expression used to filter the dataset. This should be a string (e.g., "price > 10000")
shiny	Logical (TRUE, FALSE) to indicate if the function call originate inside a shiny app
custom	Logical (TRUE, FALSE) to indicate if ggplot object (or list of ggplot objects) should be returned. This opion can be used to customize plots (e.g., add a title, change x and y labels, etc.). See examples and http://docs.ggplot2.org/ for options.

Details

See http://radiant-rstats.github.io/docs/data/visualize.html for an example in Radiant

Value

Generated plots

Examples

```
visualize("diamonds", "carat", "price", type = "scatter", check = "loess")
visualize("diamonds", "price:x", type = "hist")
visualize("diamonds", "carat:x", yvar = "price", type = "scatter")
visualize(dataset = "diamonds", yvar = "price", xvar = c("cut","clarity"),
  type = "bar", fun = "median")
visualize(dataset = "diamonds", yvar = "price", xvar = c("cut","clarity"),
  type = "line", fun = "max")
visualize(dataset = "diamonds", yvar = "price", xvar = "carat", type = "scatter", custom = TRUE) +
  ggtitle("A scatterplot") + xlab("price in $")
visualize(dataset = "diamonds", xvar = "price:carat", custom = TRUE) %>%
  {.[[1]] + ggtitle("A histogram") + xlab("price in $")}
diamonds %>% visualize(c("price","carat","depth"), type = "density")
```

---

weighted.sd *Weighted standard deviation*

Description

Weighted standard deviation

Usage

```
weighted.sd(x, wt, na.rm = TRUE)
```

Arguments

x	Numeric vector
wt	Numeric vector of weights
na.rm	Remove missing values (default is TRUE)

Details

Calculated a weighted standard deviation

`which.pmax` *Returns the index of the (parallel) maxima of the input values*

Description

Returns the index of the (parallel) maxima of the input values

Usage

```
which.pmax(...)
```

Arguments

`...`	Numeric or character vectors of the same length

Value

Vector of rankings

Examples

```
which.pmax(1:10, 10:1)
which.pmax(2, 10:1)
```

`which.pmin` *Returns the index of the (parallel) minima of the input values*

Description

Returns the index of the (parallel) minima of the input values

Usage

```
which.pmin(...)
```

Arguments

`...`	Numeric or character vectors of the same length

Value

Vector of rankings

Examples

```
which.pmin(1:10, 10:1)
which.pmin(2, 10:1)
```

`xtile` *Create a quintile (or decile) index*

Description

Create a quintile (or decile) index

Usage

```
xtile(x, n, rev = FALSE)
```

Arguments

`x`	Numeric variable
`n`	number of bins to create
`rev`	Reverse the order of the xtiles

Details

Same as stata

Examples

```
xtile(1:10,5)
xtile(1:10,5, rev = TRUE)
```

Index