# Package 'radiant'

September 27, 2015

```
Title Business Analytics using R and Shiny
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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 (>= 1.0.0),
      lubridate (>= 1.3.3),
      tidyr (>= 0.3.1),
      dplyr (>= 0.4.3)
Imports DiagrammeR(>= 0.7),
      car (>= 2.0.22),
      MASS (>= 7.3),
      gridExtra (>= 2.0.0),
      AlgDesign (>= 1.1.7.3),
      psych (>= 1.4.8.11),
      GPArotation (>= 2014.11.1),
      wordcloud (>= 2.5),
      markdown (>= 0.7.4),
      knitr (>= 1.8),
      ggdendro (>= 0.1.17),
      broom (>= 0.3.7),
      pryr (>= 0.1),
      shiny (>= 0.12.2),
      shinyAce (>= 0.2.1),
      DT (>= 0.1.39),
      MathJaxR (>= 0.11),
      readr (>= 0.1.1),
      data.tree(>= 0.2.1),
      yaml(>= 2.1.13),
      scales(>= 0.2.5),
      curl(>= 0.9.1),
      stringr (>= 1.0)
Suggests rmarkdown (>= 0.4.2),
      devtools (>= 1.8.0),
      testthat (>= 0.10.0),
      covr (>= 1.2.0)
```

2 R topics documented:

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

BugReports https://github.com/vnijs/radiant/issues

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LazyData true

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# Description

Wrapper for as.character

# Usage

as\_character(x)

# Arguments

x Input vector

6 as\_dmy

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

### **Description**

Distance in kilometers or miles between two locations based on lat-long Function based on <a href="http://www.movable-type.co.uk/scripts/latlong.html">http://www.movable-type.co.uk/scripts/latlong.html</a>. 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**

Х

Input variable

as\_dmy\_hm 7

#### 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

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 datetime

# Description

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

# Usage

```
as_dmy_hms(x)
```

### **Arguments**

Х

Input variable

# Value

Date-time variable of class Date

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

8 as\_hm

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

Х

as\_hm

Convert input in hour-minute format to time

# Description

Convert input in hour-minute format to time

Input vector

# Usage

 $as_hm(x)$ 

### **Arguments**

Χ

Input variable

### Value

Time variable of class Period

as\_hms 9

### **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**

Χ

Input variable

10 as\_mdy

### 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**

х

Input variable

# **Details**

Use as.character if x is a factor

### Value

Date variable of class Date

```
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 11

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

Х

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 datetime

# Description

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

# Usage

```
as_mdy_hms(x)
```

# Arguments

х

Input variable

# Value

Date-time variable of class Date

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

12 as\_ymd

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**

Х

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\_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

Х

Input variable

#### Value

Date variable of class Date

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

as\_ymd\_hm 13

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**

Χ

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 datetime

### **Description**

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

### Usage

```
as_ymd_hms(x)
```

# Arguments

Х

Input variable

# Value

Date-time variable of class Date

```
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)
```

14 center

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

Input variable Χ

#### Value

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

changedata 15

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

# **Examples**

```
r_data <<- list()
r_data$dat <<- data.frame(a = 1:20)
changedata("dat",20:1, "b")
head(r_data$dat)
rm(r_data, envir = .GlobalEnv)</pre>
```

city

City distances

#### **Description**

City distances

# Usage

data(city)

#### **Format**

A data frame with 45 rows and 3 variables

# Details

Distance in miles between nine cities in the USA. The dataset is used to illustrate multi-dimensional scaling (MDS). Description provided in attr(city, "description")

16 combinedata

clean_loadings	Sort and clean loadings	
----------------	-------------------------	--

#### **Description**

Sort and clean loadings

### Usage

```
clean_loadings(floadings, cutoff = 0, fsort = FALSE, dec = 8)
```

### **Arguments**

floadings Data frame with loadings

cutoff Show only loadings with (absolute) values above cutoff (default = 0)

fsort Sort factor loadings

dec Number of decimals to show

### **Details**

See http://vnijs.github.io/radiant/marketing/full\_factor.html for an example in Radiant

#### **Examples**

```
result <- full_factor("diamonds",c("price","carat","table","x","y"))
clean_loadings(result$floadings, TRUE, .5, 2)</pre>
```

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 = "", 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'

compare\_means 17

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 <a href="http://vnijs.github.io/radiant/base/combine.html">html</a> for further details

ntml for further details

name

Name for the combined dataset

#### **Details**

See http://vnijs.github.io/radiant/base/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

```
combinedata("titanic","titanic_pred",c("pclass","sex","age")) %>% head
titanic %>% combinedata("titanic_pred",c("pclass","sex","age")) %>% head
titanic %>% combinedata(titanic_pred,c("pclass","sex","age")) %>% head
avengers %>% combinedata(superheroes, type = "bind_cols")
combinedata("avengers", "superheroes", type = "bind_cols")
avengers %>% combinedata(superheroes, type = "bind_rows")
```

compare\_means

Compare means for two or more variables

#### **Description**

Compare means for two or more variables

# Usage

```
compare_means(dataset, var1, var2, samples = "independent",
  alternative = "two.sided", conf_lev = 0.95, adjust = "none",
  test = "t", data_filter = "")
```

18 compare\_props

### **Arguments**

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant
var1	A numeric variable or factor selected for comparison
var2	One or more numeric variables for comparison. If var1 is a factor only one variable can be selected and the mean of this variable is compared across (factor) levels of va1r
samples	Are samples indepent ("independent") or not ("paired")
alternative	The alternative hypothesis ("two.sided", "greater" or "less")
conf_lev	Span of the confidence interval
adjust	Adjustment for multiple comparisons ("none" or "bonf" for Bonferroni)
test	T-test ("t") or Wilcox ("wilcox")
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")

### **Details**

See http://vnijs.github.io/radiant/quant/compare\_means.html for an example in Radiant

#### Value

A list of all variables defined in the function as an object of class compare\_means

#### See Also

```
summary.compare_means to summarize results
plot.compare_means to plot results
```

### **Examples**

```
result <- compare_means("diamonds","cut","price")
result <- diamonds %>% compare_means("cut","price")
```

### **Description**

Compare proportions across groups

### Usage

```
compare_props(dataset, var1, var2, levs = "", alternative = "two.sided",
  conf_lev = 0.95, adjust = "none", data_filter = "")
```

computer 19

### **Arguments**

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant
var1	A grouping variable to split the data for comparisons
var2	The variable to calculate proportions for
levs	The factor level selected for the proportion comparison
alternative	The alternative hypothesis ("two.sided", "greater" or "less")
conf_lev	Span of the confidence interval
adjust	Adjustment for multiple comparisons ("none" or "bonf" for Bonferroni)
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")

#### **Details**

See http://vnijs.github.io/radiant/quant/compare\_props.html for an example in Radiant

### Value

A list of all variables defined in the function as an object of class compare\_props

#### See Also

```
summary.compare_props to summarize results
plot.compare_props to plot results
```

### **Examples**

```
result <- compare_props("titanic", "pclass", "survived")
result <- titanic %>% compare_props("pclass", "survived")
```

computer

Perceptions of computer (re)sellers

# Description

Perceptions of computer (re)sellers

# Usage

```
data(computer)
```

### **Format**

A data frame with 5 rows and 8 variables

# Details

Perceptions of computer (re)sellers. The dataset is used to illustrate perceptual maps. Description provided in attr(computer, "description")

20 conjoint

|--|

# Description

Conjoint analysis

### Usage

```
conjoint(dataset, dep_var, indep_var, reverse = FALSE, data_filter = "")
```

# **Arguments**

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an $r$ _data list from Radiant
dep_var	The dependent variable (e.g., profile ratings)
indep_var	Independent variables in the regression
reverse	Reverse the values of the dependent variable ('dep_var')
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")

# **Details**

```
See http://vnijs.github.io/radiant/marketing/conjoint.html for an example in Radiant
```

# Value

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

# See Also

```
summary.conjoint to summarize results
plot.conjoint to plot results
```

```
result <- conjoint("mp3", dep_var = "Rating", indep_var = "Memory:Shape")
result <- mp3 %>% conjoint(dep_var = "Rating", indep_var = "Memory:Shape")
```

conjoint\_profiles 21

conjoint\_profiles

Create fractional factorial design for conjoint analysis

#### **Description**

Create fractional factorial design for conjoint analysis

#### Usage

```
conjoint_profiles(dataset)
```

#### **Arguments**

dataset

Dataset name (string). This can be a dataframe in the global environment or an element in an r\_data list from Radiant

#### **Details**

See http://vnijs.github.io/radiant/marketing/conjoint\_profiles.html for an example in Radiant

#### Value

A list with all variables defined in the function as an object of class conjoint\_profiles

#### See Also

summary.conjoint\_profiles to summarize results

### **Examples**

copy\_all

Source all package functions

### **Description**

Source all package functions

### Usage

```
copy_all(.from)
```

copy\_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 <a href="https://github.com/smbache/import/issues/4">https://github.com/smbache/import/issues/4</a> for a discussion. This function will be depracated when (if) it is included in <a href="https://github.com/smbache/import">https://github.com/smbache/import</a>

### **Examples**

```
copy_all(radiant)
```

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 <a href="https://github.com/smbache/import/issues/4">https://github.com/smbache/import/issues/4</a> for a discussion. This function will be depracated when (if) it is included in <a href="https://github.com/smbache/import">https://github.com/smbache/import</a>

```
copy_from(radiant, state_init)
```

correlation 23

# Description

Calculate correlations for two or more variables

# Usage

```
correlation(dataset, vars, type = "pearson", data_filter = "")
```

### **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	Variables to include in the analysis
type	Type of correlations to calculate. Options are "pearson", "spearman", and "kendall". "pearson" is the default
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")

# **Details**

```
See http://vnijs.github.io/radiant/quant/correlation.html for an example in Radiant
```

# Value

A list with all variables defined in the function as an object of class compare\_means

#### See Also

```
summary.correlation_ to summarize results
plot.correlation_ to plot results
```

```
result <- correlation("diamonds", c("price","carat","clarity"))
result <- correlation("diamonds", "price:table")
result <- diamonds %>% correlation("price:table")
```

24 cross\_tabs

cross_	tabs	Evaluate associations between categorical variables

# **Description**

Evaluate associations between categorical variables

### Usage

```
cross_tabs(dataset, var1, var2, data_filter = "")
```

# **Arguments**

dataset Dataset name (string). This can be a dataframe in the global environment or an

element in an r\_data list from Radiant

var1 A categorical variable

var2 Another categorical variable

expression should be a string (e.g., "price > 10000")

#### **Details**

```
See http://vnijs.github.io/radiant/quant/cross_tabs.html for an example in Radiant
```

# Value

A list of all variables used in cross\_tabs as an object of class cross\_tabs

### See Also

```
summary.cross_tabs to summarize results
plot.cross_tabs to plot results
```

```
result <- cross_tabs("newspaper", "Income", "Newspaper")
result <- newspaper %>% cross_tabs("Income", "Newspaper")
```

cv 25

C۷

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))
```

decile\_split

Create deciles

# Description

Create deciles

# Usage

```
decile_split(x)
```

# **Arguments**

x Input variable

# Value

Factor variable

26 does\_vary

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

Х

Input variable

### Value

```
Logical. TRUE is there is variability
```

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

dtree 27

dtree

Create a decision tree

### **Description**

Create a decision tree

### Usage

```
dtree(yl)
```

### **Arguments**

y1

A yaml string or a list (e.g., from yaml::yaml.load\_file())

#### **Details**

See http://vnijs.github.io/radiant/base/dtree.html for an example in Radiant

#### Value

A list with the initial tree and the calculated tree

#### See Also

```
summary.dtree to summarize results plot.dtree to plot results
```

dtree\_parser

Parse yaml input for dtree to provide (more) useful error messages

# Description

Parse yaml input for dtree to provide (more) useful error messages

# Usage

```
dtree_parser(yl)
```

### **Arguments**

yl

A yaml string

#### **Details**

See http://vnijs.github.io/radiant/base/dtree.html for an example in Radiant

### Value

An updated yaml string or a vector messages to return to the users

28 explore

#### See Also

```
dtree to calculate tree
summary.dtree to summarize results
plot.dtree to plot results
```

explore

Explore data

# Description

Explore data

# Usage

```
explore(dataset, vars = "", byvar = "", fun = "mean_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://vnijs.github.io/radiant/base/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
```

```
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 29

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

ff\_design

Function to generate a fractional factorial design

# Description

Function to generate a fractional factorial design

# Usage

```
ff_design(attr, trial = 0, rseed = 172110)
```

# Arguments

attr Attributes used to generate profiles

trial Number of trials that have already been run

rseed Random seed to use

# **Details**

See http://vnijs.github.io/radiant/marketing/conjoint\_profiles.html for an example in Radiant

# See Also

```
conjoint_profiles to calculate results
summary.conjoint_profiles to summarize results
```

30 flip

filterdata	fil	tei	rdata	
------------	-----	-----	-------	--

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

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://vnijs.github.io/radiant/base/explore.html for an example in Radiant

### See Also

```
explore to generate summaries
make_expl to create the DT table
```

full\_factor 31

#### **Examples**

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

full\_factor

Factor analysis (PCA)

# Description

Factor analysis (PCA)

#### Usage

```
full_factor(dataset, vars, method = "PCA", nr_fact = 2,
  rotation = "varimax", data_filter = "")
```

### **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	Variables to include in the analysis
method	Factor extraction method to use
nr_fact	Number of factors to extract
rotation	Apply varimax rotation or no rotation ("varimax" or "none")
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")

### Details

See http://vnijs.github.io/radiant/marketing/full\_factor.html for an example in Radiant

#### Value

A list with all variables defined in the function as an object of class full\_factor

### See Also

```
summary.full_factor to summarize results
plot.full_factor to plot results
```

```
result <- full_factor("diamonds",c("price","carat","table","x","y"))
result <- full_factor("diamonds",c("price","carat","table","x","y"), method = "maxlik")
result <- diamonds %>% full_factor(c("price","carat","table","x","y"), method = "maxlik")
```

32 getdata

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)

getsummary 33

#### Value

Data.frame with specified columns and rows

### **Examples**

```
r_data <<- list()
r_data$dat <<- mtcars
getdata("dat","mpg:vs", filt = "mpg > 20", rows = 1:5)
rm(r_data, envir = .GlobalEnv)
```

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

glm\_reg

Generalized linear models (GLM)

# Description

Generalized linear models (GLM)

### Usage

```
glm_reg(dataset, dep_var, indep_var, lev = "", link = "logit",
  int_var = "", check = "", data_filter = "")
```

34 hier\_clus

#### **Arguments**

dataset Dataset name (string). This can be a dataframe in the global environment or an element in an r\_data list from Radiant dep\_var The dependent variable in the logit (probit) model indep\_var Independent variables in the model The level in the dependent variable defined as \_success\_ lev Link function for \_glm\_ ('logit' or 'probit'). 'logit' is the default link int\_var Interaction term to include in the model (not implement) Optional output or estimation parameters. "vif" to show the multicollinearity check diagnostics. "confint" to show coefficient confidence interval estimates. "odds" to show odds ratios and confidence interval estimates. "standardize" to output standardized coefficient estimates. "stepwise" to apply step-wise selection of variables 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")

#### **Details**

```
See http://vnijs.github.io/radiant/quant/glm_reg.html for an example in Radiant
```

#### Value

A list with all variables defined in glm\_reg as an object of class glm\_reg

#### See Also

```
summary.glm_reg to summarize the results
plot.glm_reg to plot the results
predict.glm_reg to generate predictions
plot.glm_predict to plot prediction output
```

# **Examples**

```
result <- glm_reg("titanic", "survived", c("pclass", "sex"), lev = "Yes")
result <- glm_reg("titanic", "survived", c("pclass", "sex"))</pre>
```

hier\_clus

Hierarchical cluster analysis

### **Description**

Hierarchical cluster analysis

### Usage

```
hier_clus(dataset, vars, distance = "sq.euclidian", method = "ward.D",
   data_filter = "")
```

inverse 35

### **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 Vector of variables to include in the analysis

distance Distance method Method

expression should be a string (e.g., "price > 10000")

#### **Details**

See http://vnijs.github.io/radiant/marketing/hier\_clus.html for an example in Radiant

#### Value

A list of all variables used in hier\_clus as an object of class hier\_clus

### See Also

```
summary.hier_clus to summarize results
plot.hier_clus to plot results
```

### **Examples**

```
result <- hier_clus("shopping", vars = c("v1:v6"))</pre>
```

inverse

Calculate inverse of a variable

### **Description**

Calculate inverse of a variable

### Usage

inverse(x)

### **Arguments**

Χ

Input variable

#### Value

1/x

is\_string

is\_empty

Is a character variable defined

### **Description**

Is a character variable defined

### Usage

```
is_empty(x, empty = "")
```

### **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\_string

Is input a string?

# Description

Is input a string?

# Usage

```
is_string(x)
```

# Arguments

Χ

Input

### **Details**

Is input a string

# Value

TRUE if string, else FALSE

iterms 37

#### **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 = ".")
```

kmeans\_clus

K-means cluster analysis

### **Description**

K-means cluster analysis

### Usage

```
kmeans_clus(dataset, vars, hc_init = TRUE, distance = "sq.euclidian",
  method = "ward.D", seed = 1234, nr_clus = 2, data_filter = "")
```

38 kurtosi

### **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 Vector of variables to include in the analysis

hc\_init Use centers from hier\_clus as the starting point

distance Distance for hier\_clus
method Method for hier\_clus

seed Random see to use for kmeans if hc\_init is FALSE

nr\_clus Number of clusters to extract

expression should be a string (e.g., "price > 10000")

#### **Details**

See http://vnijs.github.io/radiant/marketing/kmeans\_clus.html for an example in Radiant

#### Value

A list of all variables used in kmeans\_clus as an object of class kmeans\_clus

## See Also

```
summary.kmeans_clus to summarize results
plot.kmeans_clus to plot results
save_membership to add cluster membership to the selected dataset
```

# Examples

```
result <- kmeans_clus("shopping", c("v1:v6"))</pre>
```

kurtosi *Exporting* 

Exporting the kurtosi function from the psych package

### **Description**

Exporting the kurtosi function from the psych package

launcher 39

launcher	Create a launcher on the desktop for Windows (.bat), Mac (.com-
	mand), or Linux (.sh)

## Description

Create a launcher on the desktop for Windows (.bat), Mac (.command), or Linux (.sh)

### Usage

```
launcher(app = c("analytics", "marketing", "quant", "base"))
```

#### **Arguments**

app App to run when the desktop icon is double-clicked ("analytics", "marketing", "quant", or "base"). Default is "analytics"

### **Details**

On Windows/Mac/Linux a file named radiant.bat/radiant.command/radiant.sh will be put on the desktop. Double-click the file to launch the specified Radiant app

#### See Also

```
win_launcher to create a shortcut on Windows
mac_launcher to create a shortcut on Mac
lin_launcher to create a shortcut on Linux
```

lin\_launcher

Create a launcher and updater for Linux (.sh)

### **Description**

Create a launcher and updater for Linux (.sh)

## Usage

```
lin_launcher(app = c("analytics", "marketing", "quant", "base"))
```

### **Arguments**

app App to run when the desktop icon is double-clicked ("analytics", "marketing", "quant", or "base"). Default is "analytics"

### **Details**

On Linux a file named 'radiant.sh' and one named 'update\_radiant.sh' will be put on the desktop. Double-click the file to launch the specified Radiant app or update Radiant to the latest version

40 loadcsv

## **Examples**

```
if (interactive()) {
   if (Sys.info()["sysname"] == "Linux") {
      lin_launcher()
      fn <- paste0("/home/",Sys.getenv("USER"),"/Desktop/radiant.sh")
      if (!file.exists(fn))
        stop("Linux launcher not created")
      else
        unlink(fn)
   }
}</pre>
```

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

## Arguments

fn	File name string
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 41

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

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

42 make\_dt

mac\_launcher

Create a launcher and updater for Mac (.command)

## Description

Create a launcher and updater for Mac (.command)

## Usage

```
mac_launcher(app = c("analytics", "marketing", "quant", "base"))
```

### **Arguments**

арр

App to run when the desktop icon is double-clicked ("analytics", "marketing", "quant", or "base"). Default is "analytics"

### **Details**

On Mac a file named 'radiant.command' and one named 'update\_radiant.command' will be put on the desktop. Double-click the file to launch the specified Radiant app or update Radiant to the latest version

### **Examples**

```
if (interactive()) {
   if (Sys.info()["sysname"] == "Darwin") {
     mac_launcher()
     fn <- paste0("/Users/",Sys.getenv("USER"),"/Desktop/radiant.command")
     if (!file.exists(fn))
        stop("Mac launcher not created")
     else
        unlink(fn)
   }
}</pre>
```

make\_dt

Make a pivot tabel in DT

#### **Description**

Make a pivot tabel in DT

### Usage

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

make\_expl 43

#### **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)

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://vnijs.github.io/radiant/base/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://vnijs.github.io/radiant/base/explore.html for an example in Radiant

44 make\_train

#### 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**

Х

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

max\_rm 45

### 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**

Х

Input variable

## Value

Maximum value

## **Examples**

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

mds

(Dis)similarity based brand maps (MDS)

# Description

(Dis)similarity based brand maps (MDS)

## Usage

```
mds(dataset, id1, id2, dis, method = "metric", nr_dim = 2,
    data_filter = "")
```

46 mean\_rm

### **Arguments**

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant
id1	A character variable or factor with unique entries
id2	A character variable or factor with unique entries
dis	A numeric measure of brand dissimilarity
method	Apply metric or non-metric MDS
nr_dim	Number of dimensions
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")

#### **Details**

See http://vnijs.github.io/radiant/marketing/mds.html for an example in Radiant

#### Value

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

#### See Also

```
summary.mds to summarize results
plot.mds to plot results
```

# **Examples**

```
result <- mds("city", "from", "to", "distance")
summary(result)
result <- mds("diamonds", "clarity", "cut", "price")
summary(result)</pre>
```

mean\_rm

 $Mean \ with \ na.rm = TRUE$ 

## Description

Mean with na.rm = TRUE

### Usage

 $mean_rm(x)$ 

## Arguments

x Input variable

## Value

Mean value

median\_rm 47

# **Examples**

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

median\_rm

 $Median\ with\ na.rm = TRUE$ 

# Description

Median with na.rm = TRUE

# Usage

```
median_rm(x)
```

# Arguments

Χ

Input variable

### Value

Median value

# **Examples**

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

median\_split

Median split

# Description

Median split

# Usage

```
median_split(x)
```

# Arguments

Х

Input variable

### Value

Factor variable deciles

48 mode\_rm

min\_rm

 $Min\ with\ na.rm = TRUE$ 

# Description

Min with na.rm = TRUE

# Usage

min\_rm(x)

# Arguments

Х

Input variable

## Value

Minimum value

# **Examples**

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

 ${\sf mode\_rm}$ 

 $Mode\ with\ na.rm = TRUE$ 

# Description

Mode with na.rm = TRUE

# Usage

 $mode_rm(x)$ 

# **Arguments**

Χ

Input variable

## Value

Mode value

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

mp3 49

mp3

Conjoint data for MP3 players

## Description

Conjoint data for MP3 players

### Usage

```
data(mp3)
```

#### **Format**

A data frame with 18 rows and 6 variables

### **Details**

Conjoint data for MP3 players. Description provided in attr(mp3, "description")

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

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

50 normalize

newspaper

Newspaper readership

# Description

Newspaper readership

## Usage

```
data(newspaper)
```

#### **Format**

A data frame with 580 rows and 2 variables

## **Details**

Newspaper readership data for 580 consumers. Description provided in attr(newspaper,"description")

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 51

n\_missing

Number of missing values

## Description

Number of missing values

# Usage

```
n_missing(x)
```

## **Arguments**

Х

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

Χ

Input variable

na.rm

If TRUE missing values are removed before calculation

## Value

5th percentile

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

52 p75

p25

25th percentile

# Description

25th percentile

## Usage

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

## **Arguments**

Х

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

Х

Input variable

na.rm

If TRUE missing values are removed before calculation

### Value

75th percentile

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

p95 53

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",
  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, "colum" 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")

10000")

shiny Logical (TRUE, FALSE) to indicate if the function call originate inside a shiny

app

54 plot.compare\_means

#### **Details**

Create a pivot-table. See http://vnijs.github.io/radiant/base/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</pre>
```

plot.compare\_means

Plot method for the compare\_means function

## Description

Plot method for the compare\_means function

### Usage

```
## S3 method for class 'compare_means'
plot(x, plots = "bar", shiny = FALSE, ...)
```

#### **Arguments**

X	Return value from compare_means
plots	One or more plots ("bar", "box", or "density")
shiny	Did the function call originate inside a shiny app
	further arguments passed to or from other methods

## **Details**

See http://vnijs.github.io/radiant/quant/compare\_means.html for an example in Radiant

### See Also

```
compare_means to calculate results
summary.compare_means to summarize results
```

```
result <- compare_means("diamonds","cut","price")
plot(result, plots = c("bar","density"))</pre>
```

plot.compare\_props 55

plot.compare\_props

Plot method for the compare\_props function

### **Description**

Plot method for the compare\_props function

#### Usage

```
## S3 method for class 'compare_props'
plot(x, plots = "props", shiny = FALSE, ...)
```

### **Arguments**

```
x Return value from compare_props

Did the function call originate inside a shiny app

further arguments passed to or from other methods
```

#### **Details**

See http://vnijs.github.io/radiant/quant/compare\_props.html for an example in Radiant

### See Also

```
compare_props to calculate results
summary.compare_props to summarize results
```

### **Examples**

```
result <- compare_props("titanic", "pclass", "survived")
plot(result, plots = c("props","counts"))</pre>
```

plot.conjoint

Plot method for the conjoint function

## Description

Plot method for the conjoint function

## Usage

```
## S3 method for class 'conjoint'
plot(x, plots = "pw", scale_plot = FALSE,
    shiny = FALSE, ...)
```

56 plot.correlation\_

### **Arguments**

X	Return value from conjoint
plots	Show either the part-worth ("pw") or importance-weights ("iw") plot
scale_plot	Scale the axes of the part-worth plots to the same range
shiny	Did the function call originate inside a shiny app
	further arguments passed to or from other methods

#### **Details**

See http://vnijs.github.io/radiant/marketing/conjoint.html for an example in Radiant

### See Also

```
conjoint to generate results
summary.conjoint to summarize results
```

## **Examples**

```
result <- conjoint(dataset = "mp3", dep_var = "Rating", indep_var = "Memory:Shape")
plot(result, scale_plot = TRUE)
plot(result, plots = "iw")</pre>
```

plot.correlation\_

Plot method for the correlation function

## Description

Plot method for the correlation function

## Usage

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

### **Arguments**

x Return value from correlation

... further arguments passed to or from other methods.

## **Details**

See http://vnijs.github.io/radiant/quant/correlation.html for an example in Radiant

#### See Also

```
correlation to calculate results
summary.correlation_ to summarize results
```

plot.cross\_tabs 57

### **Examples**

```
result <- correlation("diamonds",c("price","carat","clarity"))
plot(result)
diamonds %>% correlation("price:clarity") %>% plot
```

plot.cross\_tabs

Plot method for the cross\_tabs function

## Description

Plot method for the cross\_tabs function

## Usage

```
## S3 method for class 'cross_tabs'
plot(x, check = "", shiny = FALSE, ...)
```

## Arguments

Х	Return value from cross_tabs
check	Show plots for variables var1 and var2. "observed" for the observed frequencies table, "expected" for the expected frequencies table (i.e., frequencies that would be expected if the null hypothesis holds), "chi_sq" for the contribution to the overall chi-squared statistic for each cell (i.e., (o - e)^2 / e), "dev_std" for the standardized differences between the observed and expected frequencies (i.e., (o - e) / sqrt(e)), and "dev_perc" for the percentage difference between the observed and expected frequencies (i.e., (o - e) / e)
shiny	Did the function call originate inside a shiny app
	further arguments passed to or from other methods

### **Details**

See http://vnijs.github.io/radiant/quant/cross\_tabs.html for an example in Radiant

### See Also

```
cross_tabs to calculate results
summary.cross_tabs to summarize results
```

```
result <- cross_tabs("newspaper", "Income", "Newspaper")
plot(result, check = c("observed","expected","chi_sq"))
newspaper %>% cross_tabs("Income", "Newspaper") %>% plot(c("observed","expected"))
```

58 plot.full\_factor

_	
nlot	dtree
DIOL.	utice

Plot method for the dtree function

### **Description**

Plot method for the dtree function

#### Usage

```
## S3 method for class 'dtree'
plot(x, symbol = "$", dec = 3, final = FALSE,
    shiny = FALSE, ...)
```

### **Arguments**

Χ	Return value from dtree
symbol	Monetary symbol to use (\$ is the default)
dec	Decimal places to round results to
final	If TRUE plot the decision tree solution, else the initial decision tree
shiny	Did the function call originate inside a shiny app
	further arguments passed to or from other methods

#### **Details**

```
See http://vnijs.github.io/radiant/quant/dtree.html for an example in Radiant
```

## See Also

```
dtree to generate the result summary. dtree to summarize results
```

```
plot.full_factor
```

Plot method for the full\_factor function

### **Description**

Plot method for the full\_factor function

# Usage

```
## S3 method for class 'full_factor'
plot(x, shiny = FALSE, ...)
```

## **Arguments**

x	Return value from full_factor
shiny	Did the function call originate inside a shiny app
	further arguments passed to or from other methods

plot.glm\_predict 59

#### **Details**

See http://vnijs.github.io/radiant/marketing/full\_factor.html for an example in Radiant

#### See Also

```
full_factor to calculate results plot.full_factor to plot results
```

## **Examples**

```
result <- full_factor("diamonds",c("price","carat","table"))
plot(result)
result <- full_factor("computer","high_end:business")
summary(result)</pre>
```

plot.glm\_predict

Plot method for the predict.glm\_reg function

## Description

Plot method for the predict.glm\_reg function

## Usage

```
## S3 method for class 'glm_predict'
plot(x, xvar = "", facet_row = ".", facet_col = ".",
    color = "none", conf_lev = 0.95, ...)
```

### Arguments

Х	Return value from predict.glm_reg.
xvar	Variable to display along the X-axis of the plot
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 colour
conf_lev	Confidence level to use for prediction intervals (.95 is the default). Note that the error bars for predictions are approximations at this point.
	further arguments passed to or from other methods

#### **Details**

```
See http://vnijs.github.io/radiant/quant/glm_reg.html for an example in Radiant
```

60 plot.glm\_reg

#### See Also

```
glm_reg to generate the result
summary.glm_reg to summarize results
plot.glm_reg to plot results
predict.glm_reg to generate predictions
```

#### **Examples**

```
result <- glm_reg("titanic", "survived", c("pclass", "sex", "age"), lev = "Yes")</pre>
pred <- predict(result, pred_cmd = "pclass = levels(pclass)")</pre>
plot(pred, xvar = "pclass")
pred <- predict(result, pred_cmd = "age = 0:100")</pre>
plot(pred, xvar = "age")
pred <- predict(result, pred_cmd = "pclass = levels(pclass), sex = levels(sex)")</pre>
plot(pred, xvar = "pclass", color = "sex")
pred <- predict(result, pred_cmd = "pclass = levels(pclass), age = seq(0,100,20)")</pre>
plot(pred, xvar = "pclass", color = "age")
plot(pred, xvar = "age", color = "pclass")
pred <- predict(result, pred_cmd="pclass=levels(pclass), sex=levels(sex), age=seq(0,100,20)")</pre>
plot(pred, xvar = "age", color = "sex", facet_col = "pclass")
plot(pred, xvar = "age", color = "pclass", facet_col = "sex")
pred <- predict(result, pred_cmd="pclass=levels(pclass), sex=levels(sex), age=seq(0,100,5)")</pre>
plot(pred, xvar = "age", color = "sex", facet_col = "pclass")
plot(pred, xvar = "age", color = "pclass", facet_col = "sex")
```

plot.glm\_reg

Plot method for the glm\_reg function

### **Description**

Plot method for the glm\_reg function

#### Usage

```
## S3 method for class 'glm_reg'
plot(x, plots = "", conf_lev = 0.95, intercept = FALSE,
    shiny = FALSE, ...)
```

#### **Arguments**

X	Return value from glm_reg
plots	Plots to produce for the specified GLM model. Use "" to avoid showing any plots (default). "hist" shows histograms of all variables in the model. "scatter" shows scatter plots (or box plots for factors) for the dependent variable with each independent variable. "dashboard" is a series of four plots used to visually evaluate model. "coef" provides a coefficient plot
conf_lev	Confidence level to use for coefficient and odds confidence intervals (.95 is the default)
intercept	Include the intercept in the coefficient plot (TRUE or FALSE). FALSE is the default
shiny	Did the function call originate inside a shiny app
	further arguments passed to or from other methods

plot.hier\_clus 61

#### **Details**

See http://vnijs.github.io/radiant/quant/glm\_reg.html for an example in Radiant

#### See Also

```
glm_reg to generate results
plot.glm_reg to plot results
predict.glm_reg to generate predictions
plot.glm_predict to plot prediction output
```

### **Examples**

```
result <- glm_reg("titanic", "survived", c("pclass", "sex"), lev = "Yes")
plot(result, plots = "coef")</pre>
```

plot.hier\_clus

Plot method for the hier\_clus function

### **Description**

Plot method for the hier\_clus function

### Usage

```
## S3 method for class 'hier_clus'
plot(x, plots = c("scree", "diff"), cutoff = 0.02,
    shiny = FALSE, ...)
```

### **Arguments**

X	Return value from hier_clus
plots	Plots to return. "diff" shows the percentage change in within-cluster heterogeneity as respondents are group into different number of clusters, "dendro" shows the dendrogram, "scree" shows a scree plot of within-cluster heterogeneity
cutoff	For large datasets plots can take time to render and become hard to interpret. By selection a cutoff point (e.g., 0.05 percent) the initial steps in hierarchical cluster analysis are removed from the plot
shiny	Did the function call originate inside a shiny app
	further arguments passed to or from other methods

#### **Details**

See http://vnijs.github.io/radiant/marketing/hier\_clus.html for an example in Radiant

#### See Also

```
summary.hier_clus to summarize results
plot.hier_clus to plot results
```

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#### **Examples**

```
result <- hier_clus("shopping", vars = c("v1:v6"))
plot(result, plots = c("diff", "scree"), cutoff = .05)
plot(result, plots = "dendro", cutoff = 0)
shopping %>% hier_clus(vars = c("v1:v6")) %>% plot
```

plot.kmeans\_clus

Plot method for kmeans\_clus

## Description

Plot method for kmeans\_clus

### Usage

```
## S3 method for class 'kmeans_clus'
plot(x, shiny = FALSE, ...)
```

#### **Arguments**

```
    x Return value from kmeans_clus
    shiny Did the function call originate inside a shiny app
    further arguments passed to or from other methods
```

### Details

```
See http://vnijs.github.io/radiant/marketing/kmeans_clus.html for an example in Radiant
```

#### See Also

```
kmeans_clus to generate results
summary.kmeans_clus to summarize results
save_membership to add cluster membership to the selected dataset
```

```
result <- kmeans_clus("shopping", vars = c("v1:v6"))
plot(result)</pre>
```

plot.mds 63

plot.mds

Plot method for the mds function

## Description

Plot method for the mds function

### Usage

```
## S3 method for class 'mds'
plot(x, rev_dim = "", fontsz = 1.3, ...)
```

### **Arguments**

```
    x Return value from mds
    rev_dim Flip the axes in plots
    fontsz Font size to use in plots
    further arguments passed to or from other methods
```

#### **Details**

See http://vnijs.github.io/radiant/marketing/mds.html for an example in Radiant

#### See Also

```
mds to calculate results summary.mds to plot results
```

#### **Examples**

```
result <- mds("city","from","to","distance")
plot(result)
plot(result, rev_dim = 1:2)
plot(result, rev_dim = 1:2, fontsz = 2)</pre>
```

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, ...)
```

64 plot.pmap

### **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
	further arguments passed to or from other methods

### **Details**

See http://vnijs.github.io/radiant/base/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
```

plot.pmap

Plot method for the pmap function

## Description

Plot method for the pmap function

## Usage

```
## S3 method for class 'pmap'
plot(x, plots = "", scaling = 2.1, fontsz = 1.3, ...)
```

# **Arguments**

Х	Return value from pmap
plots	Components to include in the plot ("brand", "attr"). If data on preferences is available use "pref" to add preference arrows to the plot
scaling	Arrow scaling in the brand map
fontsz	Font size to use in plots
	further arguments passed to or from other methods

### **Details**

See http://vnijs.github.io/radiant/marketing/pmap.html for an example in Radiant

plot.pre\_factor 65

#### See Also

```
pmap to calculate results
summary.pmap to plot results
```

### **Examples**

plot.pre\_factor

Plot method for the pre\_factor function

### **Description**

Plot method for the pre\_factor function

### Usage

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

#### **Arguments**

x Return value from pre\_factor... further arguments passed to or from other methods

### **Details**

See  $\verb|http://vnijs.github.io/radiant/marketing/pre_factor.html| for an example in Radiant| for an ex$ 

# See Also

```
pre_factor to calculate results
summary.pre_factor to summarize results
```

```
result <- pre_factor("diamonds",c("price","carat","table"))
plot(result)</pre>
```

plot.regression

nlot	regre	ession

Plot method for the regression function

# Description

Plot method for the regression function

## Usage

```
## S3 method for class 'regression'
plot(x, plots = "", lines = "", conf_lev = 0.95,
  intercept = FALSE, shiny = FALSE, ...)
```

# Arguments

X	Return value from regression
plots	Regression plots to produce for the specified regression model. Enter "" to avoid showing any plots (default). "hist" to show histograms of all variables in the model. "correlations" for a visual representation of the correlation matrix selected variables. "scatter" to show scatter plots (or box plots for factors) for the dependent variables with each independent variable. "dashboard" for a series of six plots that can be used to evaluate model fit visually. "resid_pred" to plot the independent variables against the model residuals. "coef" for a coefficient plot with adjustable confidence intervals. "leverage" to show leverage plots for each independent variable
lines	Optional lines to include in the select plot. "line" to include a line through a scatter plot. "loess" to include a polynomial regression fit line. To include both use $c("line","loess")$
conf_lev	Confidence level used to estimate confidence intervals (.95 is the default)
intercept	Include the intercept in the coefficient plot (TRUE, FALSE). FALSE is the default
shiny	Did the function call originate inside a shiny app
	further arguments passed to or from other methods

### **Details**

See http://vnijs.github.io/radiant/quant/regression.html for an example in Radiant

# See Also

```
regression to generate the results
summary.regression to summarize results
predict.regression to generate predictions
```

plot.reg\_predict 67

#### **Examples**

```
result <- regression("diamonds", "price", c("carat","clarity"))
plot(result, plots = "dashboard")
plot(result, plots = "dashboard", lines = c("line","loess"))
plot(result, plots = "coef", intercept = TRUE)
plot(result, plots = "coef", conf_lev = .99, intercept = TRUE)
plot(result, plots = "hist")
plot(result, plots = "scatter", lines = c("line","loess"))
plot(result, plots = "correlations")
plot(result, plots = "leverage")
plot(result, plots = "resid_pred", lines = "line")</pre>
```

plot.reg\_predict

Plot method for the predict.regression function

### **Description**

Plot method for the predict.regression function

### Usage

```
## S3 method for class 'reg_predict'
plot(x, xvar = "", facet_row = ".", facet_col = ".",
    color = "none", conf_lev = 0.95, ...)
```

## Arguments

X	Return value from predict.regression.
xvar	Variable to display along the X-axis of the plot
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 colour
conf_lev	Confidence level to use for prediction intervals (.95 is the default). Note that the error bars for predictions are approximations at this point.
	further arguments passed to or from other methods

#### **Details**

See http://vnijs.github.io/radiant/quant/regression.html for an example in Radiant

### See Also

```
regression to generate the result
summary.regression to summarize results
plot.regression to plot results
predict.regression to generate predictions
```

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#### **Examples**

```
result <- regression("diamonds", "price", c("carat","clarity"))
pred <- predict(result, pred_cmd = "carat = 1:10")
plot(pred, xvar = "carat")
result <- regression("diamonds", "price", c("carat","clarity"), int_var = "carat:clarity")
dpred <- getdata("diamonds") %>% slice(1:100)
pred <- predict(result, pred_data = "dpred")
plot(pred, xvar = "carat", color = "clarity")
rm(dpred, envir = .GlobalEnv)</pre>
```

plot.repeater

Plot repeated simulation

### **Description**

Plot repeated simulation

#### Usage

```
## S3 method for class 'repeater'
plot(x, sum_vars = "", byvar = "sim", fun = c("sum_rm",
   "mean_rm", "sd_rm"), shiny = FALSE, ...)
```

#### **Arguments**

X	Return value from repeater
sum_vars	(Numerical) variables to summaries
byvar	Variable(s) to group data by before summarizing
fun	Functions to use for summarizing
shiny	Did the function call originate inside a shiny app
• • •	further arguments passed to or from other methods

plot.simulater

Plot method for the simulater function

#### **Description**

Plot method for the simulater function

## Usage

```
## S3 method for class 'simulater'
plot(x, shiny = FALSE, ...)
```

# Arguments

X	Return value from simulater
shiny	Did the function call originate inside a shiny app

further arguments passed to or from other methods

plot.single\_mean 69

#### **Details**

See http://vnijs.github.io/radiant/quant/simulater for an example in Radiant

#### See Also

```
single_mean to generate the result
summary.single_mean to summarize results
```

## **Examples**

plot.single\_mean

Plot method for the single\_mean function

## Description

Plot method for the single\_mean function

## Usage

```
## S3 method for class 'single_mean'
plot(x, plots = "hist", shiny = FALSE, ...)
```

## **Arguments**

X	Return value from single_mean
plots	Plots to generate. "hist" shows a histogram of the data along with vertical lines that indicate the sample mean and the confidence interval. "simulate" shows the location of the sample mean and the comparison value (comp_value). Simulation is used to demonstrate the sampling variability in the data under the null-hypothesis
shiny	Did the function call originate inside a shiny app
	further arguments passed to or from other methods

#### **Details**

```
See http://vnijs.github.io/radiant/quant/single_mean.html for an example in Radiant
```

### See Also

```
single_mean to generate the result
summary.single_mean to summarize results
```

```
result <- single_mean("diamonds","price", comp_value = 3500)
plot(result, plots = c("hist", "simulate"))</pre>
```

70 pmap

plot.single\_prop

Plot method for the single\_prop function

### **Description**

Plot method for the single\_prop function

### Usage

```
## S3 method for class 'single_prop'
plot(x, plots = "hist", shiny = FALSE, ...)
```

#### **Arguments**

X	Return value from single_prop
plots	Plots to generate. "hist" shows a histogram of the data along with vertical lines that indicate the sample proportion and the confidence interval. "simulate" shows the location of the sample proportion and the comparison value (comp_value). Simulation is used to demonstrate the sampling variability in the data under the null-hypothesis
shiny	Did the function call originate inside a shiny app
• • •	further arguments passed to or from other methods

#### **Details**

See http://vnijs.github.io/radiant/quant/single\_prop.html for an example in Radiant

#### See Also

```
single_prop to generate the result
summary.single_prop to summarize the results
```

# **Examples**

```
result <- single_prop("diamonds","clarity", lev = "IF", comp_value = 0.05)
plot(result, plots = c("hist", "simulate"))
result <- single_prop("titanic","pclass", lev = "1st")
plot(result, plots = c("hist","simulate"))</pre>
```

pmap

Attribute based brand maps

## Description

Attribute based brand maps

# Usage

```
pmap(dataset, brand, attr, pref = "", nr_dim = 2, data_filter = "")
```

predict.glm\_reg 71

#### **Arguments**

dataset Dataset name (string). This can be a dataframe in the global environment or an

element in an r\_data list from Radiant

brand A character variable with brand names

attr Names of numeric variables

pref Names of numeric brand preference measures

nr\_dim Number of dimensions

expression should be a string (e.g., "price > 10000")

### **Details**

See http://vnijs.github.io/radiant/marketing/pmap.html for an example in Radiant

### Value

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

### See Also

```
summary.pmap to summarize results
plot.pmap to plot results
```

### **Examples**

```
result <- pmap("computer","brand","high_end:business")</pre>
```

predict.glm\_reg

Predict method for the glm\_reg function

### **Description**

Predict method for the glm\_reg function

### Usage

```
## S3 method for class 'glm_reg'
predict(object, pred_vars = "", pred_data = "",
    pred_cmd = "", prn = TRUE, ...)
```

## **Arguments**

object	Return value from glm_reg
pred_vars	Variables selected to generate predictions
pred_data	Provide the name of a dataframe to generate predictions (e.g., "titanic"). The dataset must contain all columns used in the estimation
pred_cmd	Generate predictions using a command. For example, 'pclass = levels(pclass)' would produce predictions for the different levels of factor 'pclass'. To add another variable use a ',' (e.g., 'pclass = levels(pclass), age = seq(0,100,20)')
prn	Print prediction results (default is TRUE)
	further arguments passed to or from other methods

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#### **Details**

See http://vnijs.github.io/radiant/quant/glm\_reg.html for an example in Radiant

#### See Also

```
glm_reg to generate the result
summary.glm_reg to summarize results
plot.glm_reg to plot results
plot.glm_predict to plot prediction output
```

#### **Examples**

```
result <- glm_reg("titanic", "survived", c("pclass", "sex"), lev = "Yes")
predict(result, pred_cmd = "pclass = levels(pclass)")
glm_reg("titanic", "survived", c("pclass", "sex"), lev = "Yes") %>%
    predict(pred_cmd = "sex = c('male', 'female')")
glm_reg("titanic", "survived", c("pclass", "sex"), lev = "Yes") %>%
predict(pred_data = "titanic")
```

predict.regression

Predict method for the regression function

## Description

Predict method for the regression function

### Usage

```
## S3 method for class 'regression'
predict(object, pred_vars = "", pred_data = "",
    pred_cmd = "", conf_lev = 0.95, prn = TRUE, ...)
```

#### **Arguments**

object	Return value from regression
pred_vars	Variables to use for prediction
pred_data	Name of the dataset to use for prediction
pred_cmd	Command used to generate data for prediction
conf_lev	Confidence level used to estimate confidence intervals (.95 is the default)
prn	Print prediction results (default is TRUE)
	further arguments passed to or from other methods

#### **Details**

See http://vnijs.github.io/radiant/quant/regression.html for an example in Radiant

pre\_factor 73

#### See Also

```
regression to generate the result
summary.regression to summarize results
plot.regression to plot results
```

#### **Examples**

```
result <- regression("diamonds", "price", c("carat","clarity"))
predict(result, pred_cmd = "carat = 1:10")
predict(result, pred_cmd = "clarity = levels(clarity)")
result <- regression("diamonds", "price", c("carat","clarity"), int_var = c("carat:clarity"))
dpred <<- getdata("diamonds") %>% slice(1:10)
predict(result, pred_data = "dpred")
rm(dpred, envir = .GlobalEnv)
```

pre\_factor

Evaluate if data are appropriate for PCA / Factor analysis

#### **Description**

Evaluate if data are appropriate for PCA / Factor analysis

#### Usage

```
pre_factor(dataset, vars, data_filter = "")
```

### **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 Variables to include in the analysis

expression should be a string (e.g., "price > 10000")

#### **Details**

```
See http://vnijs.github.io/radiant/marketing/pre_factor.html for an example in Radiant
```

#### Value

A list with all variables defined in the function as an object of class pre\_factor

#### See Also

```
summary.pre_factor to summarize results plot.pre_factor to plot results
```

```
result <- pre_factor("diamonds",c("price","carat","table"))</pre>
```

74 publishers

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 <a href="http://stat545-ubc.github.io/bit001\_dplyr-cheatsheet">http://stat545-ubc.github.io/bit001\_dplyr-cheatsheet</a>.

<a href="http://stat545-ubc.github.io/bit001\_dplyr-cheatsheet">httml</a>. The dataset is used to illustrate data merging / joining. Description provided in attr(publishers, "description")</a>

radiant 75

radiant

radiant

# Description

radiant

Launch Radiant in the default browser

# Usage

```
radiant(app = c("analytics", "marketing", "quant", "base"))
```

# **Arguments**

app

Choose the app to run. One of "base", "quant", "analytics", "marketing". "analytics" is the default

### **Details**

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

# **Examples**

```
if (interactive()) {
  radiant("base")
  radiant("quant")
  radiant("marketing")
  radiant("analytics")
}
```

recode

Exporting the recode function from the car package

# Description

Exporting the recode function from the car package

76 regression

# Description

Linear regression using OLS

# Usage

```
regression(dataset, dep_var, indep_var, int_var = "", check = "",
  data_filter = "")
```

### **Arguments**

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant
dep_var	The dependent variable in the regression
indep_var	Independent variables in the regression
int_var	Interaction terms to include in the model
check	"standardize" to see standardized coefficient estimates. "stepwise" to apply stepwise selection of variables in estimation
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")

# **Details**

```
See http://vnijs.github.io/radiant/quant/regression.html for an example in Radiant
```

### Value

A list of all variables used in regression as an object of class regression

### See Also

```
summary.regression to summarize results
plot.regression to plot results
predict.regression to generate predictions
```

```
result <- regression("diamonds", "price", c("carat","clarity"))
result <- regression("diamonds", "price", c("carat","clarity"), check = "standardize")</pre>
```

repeater 77

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Repeat simulation

# Description

Repeat simulation

# Usage

```
repeater(nr = 12, vars = "", grid = "", seed = "", name = "",
    sim = "")
```

# Arguments

nr	Number times to repeat the simulation
vars	Variables to use in repeated simulation
grid	Expression to use in grid search for constants
seed	To repeat a simulation with the same randomly generated values enter a number into Random seed input box.
name	To save the simulated data for further analysis specify a name in the Sim name input box. You can then investigate the simulated data by choosing the specified name from the Datasets dropdown in any of the other Data tabs.
sim	Return value from the simulater function

# Examples

rndnames

100 random names

# Description

100 random names

### Usage

```
data(rndnames)
```

#### **Format**

A data frame with 100 rows and 2 variables

# **Details**

A list of 100 random names generated by  ${\tt listofrandomnames.com}$ . Description provided in attr(rndnames,"description")

78 sample\_size

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Sample size calculation

# Description

Sample size calculation

# Usage

```
sample_size(type = "mean", err_mean = 2, sd_mean = 10, err_prop = 0.1,
p_prop = 0.5, zval = 1.96, incidence = 1, response = 1,
pop_correction = "no", pop_size = 1000000)
```

# Arguments

type	Choose "mean" or "proportion"
err_mean	Acceptable Error for Mean
sd_mean	Standard deviation for Mean
err_prop	Acceptable Error for Proportion
p_prop	Initial proportion estimate for Proportion
zval	Z-value
incidence	Incidence rate (i.e., fraction of valid respondents)
response	Response rate
pop_correction	Apply correction for population size ("yes", "no")
pop_size	Population size

### **Details**

See http://vnijs.github.io/radiant/quant/sample\_size.html for an example in Radiant

# Value

A list of variables defined in sample\_size as an object of class sample\_size

# See Also

```
summary.sample_size to summarize results
```

```
result <- sample_size(type = "mean", err_mean = 2, sd_mean = 10)</pre>
```

sampling 79

### **Description**

Simple random sampling

#### Usage

```
sampling(dataset, var, sample_size, data_filter = "")
```

### **Arguments**

dataset Dataset name (string). This can be a dataframe in the global environment or an

element in an r\_data list from Radiant

var The variable to sample from sample\_size Number of units to select

expression should be a string (e.g., "price > 10000")

### **Details**

See http://vnijs.github.io/radiant/quant/sampling.html for an example in Radiant

#### Value

A list of variables defined in sampling as an object of class sampling

### See Also

```
summary.sampling to summarize results
```

# **Examples**

```
result <- sampling("rndnames", "Names", 10)</pre>
```

save\_factors

Save factor scores to active dataset

### **Description**

Save factor scores to active dataset

### Usage

```
save_factors(object)
```

# Arguments

object Return value from full\_factor

80 save\_membership

### **Details**

See http://vnijs.github.io/radiant/marketing/full\_factor.html for an example in Radiant

# **Examples**

```
result <- full_factor("diamonds",c("price","carat","table"))
save_factors(result)
head(diamonds)</pre>
```

save\_membership

Add a cluster membership variable to the active dataset

### **Description**

Add a cluster membership variable to the active dataset

# Usage

```
save_membership(object)
```

### **Arguments**

object

Return value from kmeans\_clus

#### **Details**

See http://vnijs.github.io/radiant/marketing/kmeans\_clus.html for an example in Radiant

#### See Also

```
kmeans_clus to generate results
summary.kmeans_clus to summarize results
plot.kmeans_clus to plot results
```

```
result <- kmeans_clus("shopping", vars = c("v1:v6"))
save_membership(result)
head(shopping)</pre>
```

*sd\_rm* 81

sd\_rm

 $Standard\ deviation\ with\ na.rm = TRUE$ 

# Description

Standard deviation with na.rm = TRUE

# Usage

 $sd_rm(x)$ 

# **Arguments**

Х

Input variable

# Value

Standard deviation

# **Examples**

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

serr

Standard error

# Description

Standard error

# Usage

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

# **Arguments**

Χ

Input variable

na.rm

If TRUE missing values are removed before calculation

# Value

Standard error

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

show\_duplicated

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(.)))
```

shopping

Shopping attitudes

### **Description**

Shopping attitudes

### Usage

```
data(shopping)
```

#### **Format**

A data frame with 20 rows and 7 variables

### **Details**

Attitudinal data on shopping for 20 consumers. Description provided in attr(shopping, "description")

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**

Data frame to add transformed variables to

... Variables used to evaluate row uniqueness

sig\_stars 83

#### **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

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

84 simulater

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Simulate data for decision analysis

# Description

Simulate data for decision analysis

# Usage

```
simulater(const = "", norm = "", unif = "", discrete = "", form = "", seed = "", name = "", nr = 1000, dat = NULL)
```

### **Arguments**

const	A string listing the constants to include in the analysis (e.g., " $cost = 3$ ; size = 4")
norm	A string listing the normally distributed random variables to include in the analysis (e.g., "demand 2000 1000" where the first number is the mean and the second is the standard deviation)
unif	A string listing the uniformly distributed random variables to include in the analysis (e.g., "demand 0 1" where the first number is the minimum value and the second is the maximum value)
discrete	A string listing the random variables with a discrete distribution to include in the analysis (e.g., "price 5 .3 8 .7" where for each pair of numbers the first is the value and the second the probability
form	A string with the formula to evaluate (e.g., "profit = demand * (price - cost)")
seed	To repeat a simulation with the same randomly generated values enter a number into Random seed input box.
name	To save the simulated data for further analysis specify a name in the Sim name input box. You can then investigate the simulated data by choosing the specified name from the Datasets dropdown in any of the other Data tabs.
nr	Number of simulation runs
dat	Data list from previous simulation. Used by repeater function

### **Details**

```
See http://vnijs.github.io/radiant/quant/simulater.html for an example in Radiant
```

### Value

A data.frame with the created variables

### See Also

```
summary.simulater to summarize results plot.simulater to plot results
```

single\_mean 85

single_mean	Compare a sample mean to a population mean

# Description

Compare a sample mean to a population mean

# Usage

```
single_mean(dataset, var, comp_value = 0, alternative = "two.sided",
  conf_lev = 0.95, data_filter = "")
```

# **Arguments**

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant
var	The variable selected for the mean comparison
comp_value	Population value to compare to the sample mean
alternative	The alternative hypothesis ("two.sided", "greater", or "less")
conf_lev	Span for the confidence interval
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")

### **Details**

```
See \ http://vnijs.github.io/radiant/quant/single\_mean.html \ for \ an \ example \ in \ Radiant
```

### Value

A list of variables defined in single\_mean as an object of class single\_mean

### See Also

```
summary.single_mean to summarize results
plot.single_mean to plot results
```

```
single_mean("diamonds","price")
```

86 skew

single_prop	Compare a sample proportion to a population proportion	

### **Description**

Compare a sample proportion to a population proportion

### Usage

```
single_prop(dataset, var, lev = "", comp_value = 0.5,
   alternative = "two.sided", conf_lev = 0.95, data_filter = "")
```

### **Arguments**

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an $r_{data}$ list from Radiant
var	The variable selected for the proportion comparison
lev	The factor level selected for the proportion comparison
comp_value	Population value to compare to the sample proportion
alternative	The alternative hypothesis ("two.sided", "greater", or "less")
conf_lev	Span of the confidence interval
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")

### **Details**

See http://vnijs.github.io/radiant/quant/single\_prop.html for an example in Radiant

# Value

A list of variables used in single\_prop as an object of class single\_prop

### See Also

```
summary.single_prop to summarize the results plot.single_prop to plot the results
```

# **Examples**

```
result <- single_prop("diamonds","cut")
result <- single_prop("diamonds","clarity", lev = "IF", comp_value = 0.05)</pre>
```

skew

Exporting the skew function from the psych package

# Description

Exporting the skew function from the psych package

square 87

square

Calculate square of a variable

# Description

Calculate square of a variable

# Usage

```
square(x)
```

# Arguments

Х

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/

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

88 standardize

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**

Χ

Input variable

# Value

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

state\_init 89

state\_init

Set initial value for shiny input

# Description

Set initial value for shiny input

# Usage

```
state_init(inputvar, init = "")
```

# **Arguments**

inputvar Name shiny input

init Initial value to use if state value for input not set

### **Details**

Useful for radio button or checkbox

# Value

value for inputvar

### See Also

```
state_single
state_multiple
copy_from
```

```
r_state <<- list()
state_init("test")
state_init("test",0)
r_state$test <- c("a","b")
state_init("test",0)
shiny::radioButtons("rb", label = "Button:", c("a","b"), selected = state_init("rb", "a"))
r_state$rb <- "b"
shiny::radioButtons("rb", label = "Button:", c("a","b"), selected = state_init("rb", "a"))
rm(r_state)</pre>
```

90 state\_multiple

 $state\_multiple$ 

Set initial values for shiny input from a list of values

# Description

Set initial values for shiny input from a list of values

#### Usage

```
state_multiple(inputvar, vals, init = character(0))
```

### **Arguments**

inputvar Name shiny input

vals Possible values for inputvar

init Initial value to use if state value for input not set

#### **Details**

Useful for select input with multiple = TRUE and when you want to use inputs selected for another tool (e.g., pre\_factor and full\_factor or hier\_clus and kmeans\_clus in Radiant)

### Value

value for inputvar

### See Also

```
state_init
state_single
copy_from
```

```
r_state <- list()
state_multiple("test",1:10,1:3)
r_state$test <- 8:10
state_multiple("test",1:10,1:3)
shiny::selectInput("sim", label = "Select:", c("a","b"),
    selected = state_multiple("sim", c("a","b")), multiple = TRUE)
r_state$sim <- c("a","b")
shiny::selectInput("sim", label = "Select:", c("a","b"),
    selected = state_single("sim", c("a","b")), multiple = TRUE)</pre>
```

state\_single 91

state\_single

Set initial value for shiny input from a list of values

# Description

Set initial value for shiny input from a list of values

### Usage

```
state_single(inputvar, vals, init = character(0))
```

# **Arguments**

inputvar Name shiny input

vals Possible values for inputvar

init Initial value to use if state value for input not set

#### **Details**

Useful for select input with multiple = FALSE

# Value

value for inputvar

### See Also

```
state_init
state_multiple
copy_from
```

```
r_state <- list()
state_single("test",1:10,1)
r_state$test <- 8
state_single("test",1:10,1)
shiny::selectInput("si", label = "Select:", c("a","b"), selected = state_single("si"))
r_state$si <- "b"
shiny::selectInput("si", label = "Select:", c("a","b"), selected = state_single("si", "b"))</pre>
```

92 store\_reg

store_glm	Store residuals or predicted values generated in the glm_reg function
-----------	---

### **Description**

Store residuals or predicted values generated in the glm\_reg function

# Usage

```
store_glm(object, data = object$dataset, type = "residuals",
  name = paste0(type, "_glm"))
```

# **Arguments**

object Return value from glm\_reg or predict.glm\_reg

data Dataset name

type Residuals ("residuals") or predictions ("predictions"). For predictions the dataset

name must be provided

name Variable name assigned to the residuals or predicted values

#### **Details**

```
See http://vnijs.github.io/radiant/quant/glm_reg.html for an example in Radiant
```

### **Examples**

```
result <- glm_reg("titanic", "survived", "pclass", lev = "Yes")
store_glm(result)</pre>
```

store\_reg Store residuals or predicted values generated in the regression function

## **Description**

Store residuals or predicted values generated in the regression function

### Usage

```
store_reg(object, data = object$dataset, type = "residuals",
  name = paste0(type, "_reg"))
```

# Arguments

object	Datuen value from	rograccion or	prodict	rograccion
object	Return value from	regression or	predict.	i egi ession

data Dataset name

type Residuals ("residuals") or predictions ("predictions"). For predictions the dataset

name must be provided

name Variable name assigned to the residuals or predicted values

#### **Details**

See http://vnijs.github.io/radiant/quant/regression.html for an example in Radiant

### **Examples**

```
result <- regression("diamonds", "price", c("carat","clarity"))
store_reg(result)</pre>
```

summary.compare\_means Summary method for the compare\_means function

### **Description**

Summary method for the compare\_means function

### Usage

```
## S3 method for class 'compare_means'
summary(object, ...)
```

#### **Arguments**

object Return value from compare\_means
... further arguments passed to or from other methods

#### **Details**

 $See \ http://vnijs.github.io/radiant/quant/compare\_means.html \ for \ an \ example \ in \ Radiant$ 

### See Also

```
compare_means to calculate results
plot.compare_means to plot results
```

```
result <- compare_means("diamonds","cut","price")
summary(result)
result <- diamonds %>% tbl_df %>% compare_means("x","y")
summary(result)
result <- diamonds %>% tbl_df %>% group_by(cut) %>% compare_means("x",c("x","y"))
summary(result)
```

94 summary.conjoint

```
summary.compare_props Summary method for the compare_props function
```

### **Description**

Summary method for the compare\_props function

### Usage

```
## S3 method for class 'compare_props'
summary(object, ...)
```

### **Arguments**

object Return value from compare\_props
... further arguments passed to or from other methods

#### **Details**

See http://vnijs.github.io/radiant/quant/compare\_props.html for an example in Radiant

#### See Also

```
compare_props to calculate results
plot.compare_props to plot results
```

# **Examples**

```
result <- compare_props("titanic", "pclass", "survived")
summary(result)
titanic %>% compare_props("pclass", "survived") %>% summary
```

summary.conjoint

Summary method for the conjoint function

# Description

Summary method for the conjoint function

# Usage

```
## S3 method for class 'conjoint'
summary(object, mc_diag = FALSE, ...)
```

### **Arguments**

object Return value from conjoint mc\_diag Shows multicollinearity diagnostics.

... further arguments passed to or from other methods

#### **Details**

See http://vnijs.github.io/radiant/marketing/conjoint.html for an example in Radiant

#### See Also

```
conjoint to generate results
plot.conjoint to plot results
```

### **Examples**

```
result <- conjoint("mp3", dep_var = "Rating", indep_var = "Memory:Shape")
summary(result, mc_diag = TRUE)
mp3 %>% conjoint(dep_var = "Rating", indep_var = "Memory:Shape") %>% summary(., mc_diag = TRUE)
```

```
summary.conjoint_profiles
```

Summary method for the conjoint\_profiles function

### **Description**

Summary method for the conjoint\_profiles function

### Usage

```
## S3 method for class 'conjoint_profiles'
summary(object, ...)
```

### **Arguments**

object Return value from conjoint\_profiles
... further arguments passed to or from other methods.

# Details

See http://vnijs.github.io/radiant/marketing/conjoint\_profiles.html for an example in Radiant

#### See Also

conjoint\_profiles to calculate results

96 summary.cross\_tabs

summary.correlation\_ Summary method for the correlation function

### **Description**

Summary method for the correlation function

# Usage

```
## S3 method for class 'correlation_'
summary(object, cutoff = 0, covar = FALSE, ...)
```

### **Arguments**

object Return value from correlation

cutoff Show only corrlations larger than the cutoff in absolute value. Default is a cutoff of 0

covar Show the covariance matrix (default is FALSE)

... further arguments passed to or from other methods.

#### **Details**

See http://vnijs.github.io/radiant/quant/correlation.html for an example in Radiant

### See Also

```
correlation to calculate results plot.correlation_ to plot results
```

### **Examples**

```
result <- correlation("diamonds",c("price","carat","clarity"))
summary(result, cutoff = .3)
diamonds %>% correlation("price:clarity") %>% summary
```

summary.cross\_tabs

Summary method for the cross\_tabs function

#### **Description**

Summary method for the cross\_tabs function

# Usage

```
## S3 method for class 'cross_tabs'
summary(object, check = "", ...)
```

summary.dtree 97

### **Arguments**

object Return value from cross\_tabs

check Show table(s) for variables var1 and var2. "observed" for the observed frequen-

cies table, "expected" for the expected frequencies table (i.e., frequencies that would be expected if the null hypothesis holds), "chi\_sq" for the contribution to the overall chi-squared statistic for each cell (i.e., (o - e)^2 / e), "dev\_std" for the standardized differences between the observed and expected frequencies (i.e., (o - e) / sqrt(e)), and "dev\_perc" for the percentage difference between the

observed and expected frequencies (i.e., (o - e) / e)

... further arguments passed to or from other methods.

#### **Details**

See http://vnijs.github.io/radiant/quant/cross\_tabs.html for an example in Radiant

#### See Also

```
cross_tabs to calculate results
plot.cross_tabs to plot results
```

# **Examples**

```
result <- cross_tabs("newspaper", "Income", "Newspaper")
summary(result, check = c("observed","expected","chi_sq"))
newspaper %>% cross_tabs("Income", "Newspaper") %>% summary("observed")
```

summary.dtree

Summary method for the dree function

### **Description**

Summary method for the dree function

# Usage

```
## S3 method for class 'dtree'
summary(object, ...)
```

### **Arguments**

object Return value from simulater

... further arguments passed to or from other methods

### **Details**

See http://vnijs.github.io/radiant/quant/dtree.html for an example in Radiant

#### See Also

```
dtree to generate the results plot.dtree to plot results
```

98 summary.full\_factor

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", ...)
```

# Arguments

object Return value from explore

top The variable (type) to display at the top of the table
... further arguments passed to or from other methods

#### **Details**

See http://vnijs.github.io/radiant/base/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
```

 $\verb|summary.full_factor|\\$ 

Summary method for the full\_factor function

# **Description**

Summary method for the full\_factor function

# Usage

```
## S3 method for class 'full_factor'
summary(object, cutoff = 0, fsort = FALSE, ...)
```

summary.glm\_reg 99

### **Arguments**

object Return value from full\_factor
cutoff Show only loadings with (absolute) values above cutoff (default = 0)
fsort Sort factor loadings
... further arguments passed to or from other methods

#### **Details**

See http://vnijs.github.io/radiant/marketing/full\_factor.html for an example in Radiant

#### See Also

```
full_factor to calculate results plot.full_factor to plot results
```

# **Examples**

```
result <- full_factor("diamonds",c("price","carat","depth","table","x"))
summary(result)
summary(result, cutoff = 0, fsort = FALSE)
summary(result, cutoff = 0, fsort = TRUE)
summary(result, cutoff = .5, fsort = TRUE)
diamonds %>% full_factor(c("price","carat","depth","table","x")) %>% summary
diamonds %>% full_factor(c("price","carat","depth","table","x")) %>% summary(cutoff = .5)
```

summary.glm\_reg

Summary method for the glm\_reg function

### **Description**

Summary method for the glm\_reg function

# Usage

```
## $3 method for class 'glm_reg'
summary(object, sum_check = "", conf_lev = 0.95,
  test_var = "", ...)
```

### **Arguments**

object	Return value from glm_reg
sum_check	Optional output or estimation parameters. "rsme" to show the root mean squared error. "sumsquares" to show the sum of squares table. "vif" to show multi-collinearity diagnostics. "confint" to show coefficient confidence interval estimates.
conf_lev	Confidence level to use for coefficient and odds confidence intervals (.95 is the default)
test_var	Variables to evaluate in model comparison (i.e., a competing models Chi-squared test)
	further arguments passed to or from other methods

100 summary.hier\_clus

#### **Details**

See http://vnijs.github.io/radiant/quant/glm\_reg.html for an example in Radiant

#### See Also

```
glm_reg to generate the results
plot.glm_reg to plot the results
predict.glm_reg to generate predictions
plot.glm_predict to plot prediction output
```

# **Examples**

```
result <- glm_reg("titanic", "survived", "pclass", lev = "Yes")
summary(result, test_var = "pclass")
res <- glm_reg("titanic", "survived", c("pclass", "sex"), int_var="pclass:sex", lev="Yes")
summary(res, sum_check = c("vif", "confint", "odds"))
titanic %>% glm_reg("survived", c("pclass", "sex", "age"), lev = "Yes") %>% summary("vif")
```

summary.hier\_clus

Summary method for the hier\_clus function

### **Description**

Summary method for the hier\_clus function

### Usage

```
## S3 method for class 'hier_clus'
summary(object, ...)
```

### **Arguments**

object Return value from hier\_clus
... further arguments passed to or from other methods

#### **Details**

See http://vnijs.github.io/radiant/marketing/hier\_clus.html for an example in Radiant

### See Also

```
summary.hier_clus to summarize results
plot.hier_clus to plot results
```

```
result <- hier_clus("shopping", vars = c("v1:v6"))
summary(result)</pre>
```

summary.kmeans\_clus 101

summary.kmeans\_clus

Summary method for kmeans\_clus

### **Description**

Summary method for kmeans\_clus

### Usage

```
## S3 method for class 'kmeans_clus'
summary(object, ...)
```

# **Arguments**

object Retur

Return value from kmeans\_clus

... further arguments passed to or from other methods

### **Details**

See http://vnijs.github.io/radiant/marketing/kmeans\_clus.html for an example in Radiant

### See Also

```
kmeans_clus to generate results
plot.kmeans_clus to plot results
save_membership to add cluster membership to the selected dataset
```

# **Examples**

```
result <- kmeans_clus("shopping", vars = c("v1:v6"))
summary(result)
shopping %>% kmeans_clus(vars = c("v1:v6"), nr_clus = 3) %>% summary
```

summary.mds

Summary method for the mds function

# Description

Summary method for the mds function

# Usage

```
## S3 method for class 'mds'
summary(object, dec = 1, ...)
```

102 summary.pivotr

#### **Arguments**

object Return value from mds

dec Rounding to use for output (default = 0). +1 used for coordinates. +2 used for

stress measure. Not currently accessible in Radiant

... further arguments passed to or from other methods

#### **Details**

See http://vnijs.github.io/radiant/marketing/mds.html for an example in Radiant

#### See Also

```
mds to calculate results plot.mds to plot results
```

### **Examples**

```
result <- mds("city", "from", "to", "distance")
summary(result)
summary(result, dec = 2)
city %>% mds("from", "to", "distance") %>% summary
```

summary.pivotr

Summary method for pivotr

#### **Description**

Summary method for pivotr

# Usage

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

# **Arguments**

object Return value from pivotr

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://vnijs.github.io/radiant/base/pivotr.html for an example in Radiant

#### See Also

```
pivotr to create the pivot-table using dplyr
```

summary.pmap 103

### **Examples**

```
pivotr("diamonds", cvars = "cut") %>% summary
pivotr("diamonds", cvars = "cut") %>% summary
pivotr("diamonds", cvars = "cut:clarity", nvar = "price") %>% summary
```

summary.pmap

Summary method for the pmap function

### **Description**

Summary method for the pmap function

# Usage

```
## S3 method for class 'pmap'
summary(object, cutoff = 0, ...)
```

### **Arguments**

```
object Return value from pmap

cutoff Show only loadings with (absolute) values above cutoff (default = 0)

... further arguments passed to or from other methods
```

### **Details**

See http://vnijs.github.io/radiant/marketing/pmap.html for an example in Radiant

### See Also

```
pmap to calculate results
plot.pmap to plot results
```

```
result <- pmap("computer","brand","high_end:business")
summary(result)
summary(result, cutoff = .3)
result <- pmap("computer","brand","high_end:dated", pref = c("innovative","business"))
summary(result)
computer %>% pmap("brand","high_end:dated", pref = c("innovative","business")) %>%
summary
```

104 summary.regression

summary.pre\_factor

Summary method for the pre\_factor function

# Description

Summary method for the pre\_factor function

### Usage

```
## S3 method for class 'pre_factor'
summary(object, ...)
```

# Arguments

object Return value from pre\_factor
... further arguments passed to or from other methods

#### **Details**

See http://vnijs.github.io/radiant/marketing/pre\_factor.html for an example in Radiant

#### See Also

```
pre_factor to calculate results
plot.pre_factor to plot results
```

### **Examples**

```
result <- pre_factor("diamonds",c("price","carat","table"))
summary(result)
diamonds %>% pre_factor(c("price","carat","table")) %>% summary
result <- pre_factor("computer","high_end:business")
summary(result)</pre>
```

summary.regression

Summary method for the regression function

# Description

Summary method for the regression function

# Usage

```
## $3 method for class 'regression'
summary(object, sum_check = "", conf_lev = 0.95,
   test_var = "", ...)
```

summary.repeater 105

### **Arguments**

object	Return value from regression
sum_check	Optional output or estimation parameters. "rsme" to show the root mean squared error. "sumsquares" to show the sum of squares table. "vif" to show multicollinearity diagnostics. "confint" to show coefficient confidence interval estimates.
conf_lev	Confidence level used to estimate confidence intervals (.95 is the default)
test_var	Variables to evaluate in model comparison (i.e., a competing models F-test)
	further arguments passed to or from other methods

#### **Details**

See http://vnijs.github.io/radiant/quant/regression.html for an example in Radiant

#### See Also

```
regression to generate the results
plot.regression to plot results
predict.regression to generate predictions
```

# **Examples**

```
result <- regression("diamonds", "price", c("carat","clarity"))
summary(result, sum_check = c("rmse","sumsquares","vif","confint"), test_var = "clarity")
result <- regression("shopping", "v1", c("v2","v3"))
summary(result, test_var = "v2")
shopping %>% regression("v1", "v2:v6") %>% summary
```

summary.repeater

Summarize repeated simulation

### **Description**

Summarize repeated simulation

# Usage

```
## $3 method for class 'repeater'
summary(object, sum_vars = "", byvar = "",
fun = c("sum_rm", "mean_rm", "sd_rm"), ...)
```

# **Arguments**

object Return value from repeater
sum\_vars (Numerical) variables to summaries
byvar Variable(s) to group data by before summarizing
fun Functions to use for summarizing

... further arguments passed to or from other methods

106 summary.sampling

summary.sample\_size

Summary method for the sample\_size function

### **Description**

Summary method for the sample\_size function

### Usage

```
## S3 method for class 'sample_size'
summary(object, ...)
```

### **Arguments**

object Return value from sample\_size

... further arguments passed to or from other methods

#### **Details**

See http://vnijs.github.io/radiant/quant/sample\_size for an example in Radiant

#### See Also

sample\_size to generate the results

#### **Examples**

```
result <- sample_size(type = "mean", err_mean = 2, sd_mean = 10)
summary(result)</pre>
```

summary.sampling

Summary method for the sampling function

# Description

Summary method for the sampling function

# Usage

```
## S3 method for class 'sampling'
summary(object, print_sf = TRUE, ...)
```

# Arguments

object Return value from sampling

print\_sf Print full sampling frame. Default is TRUE

... further arguments passed to or from other methods

summary.simulater 107

#### **Details**

```
See http://vnijs.github.io/radiant/quant/sampling for an example in Radiant
```

#### See Also

```
sampling to generate the results
```

### **Examples**

```
set.seed(1234)
result <- sampling("rndnames", "Names", 10)
summary(result)</pre>
```

summary.simulater

Summary method for the simulater function

# Description

Summary method for the simulater function

# Usage

```
## S3 method for class 'simulater'
summary(object, ...)
```

# **Arguments**

object Return value from simulater
... further arguments passed to or from other methods

#### **Details**

See http://vnijs.github.io/radiant/quant/simulater.html for an example in Radiant

### See Also

```
simulater to generate the results
plot.simulater to plot results
```

```
result <- simulater(norm = "demand 2000 1000")
summary(result)</pre>
```

108 summary.single\_prop

summary.single\_mean

Summary method for the single\_mean function

# Description

Summary method for the single\_mean function

# Usage

```
## S3 method for class 'single_mean'
summary(object, ...)
```

### **Arguments**

object Return value from single\_mean

... further arguments passed to or from other methods

### **Details**

See http://vnijs.github.io/radiant/quant/single\_mean.html for an example in Radiant

### See Also

```
single_mean to generate the results
plot.single_mean to plot results
```

### **Examples**

```
result <- single_mean("diamonds","price")
summary(result)
diamonds %>% single_mean("price") %>% summary
```

summary.single\_prop

Summary method for the single\_prop function

# Description

Summary method for the single\_prop function

# Usage

```
## S3 method for class 'single_prop'
summary(object, ...)
```

### **Arguments**

object Return value from single\_prop

... further arguments passed to or from other methods

sum\_rm 109

#### **Details**

See http://vnijs.github.io/radiant/quant/single\_prop.html for an example in Radiant

#### See Also

```
single_prop to generate the results
plot.single_prop to plot the results
```

# **Examples**

```
result <- single_prop("diamonds","clarity", lev = "IF", comp_value = 0.05)
summary(result)
diamonds %>% single_prop("clarity", lev = "IF", comp_value = 0.05) %>% summary
```

 $sum\_rm$ 

 $Sum\ with\ na.rm = TRUE$ 

# Description

Sum with na.rm = TRUE

# Usage

 $sum_rm(x)$ 

### **Arguments**

Х

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

110 the\_table

#### **Details**

List of super heroes from <a href="http://stat545-ubc.github.io/bit001\_dplyr-cheatsheet.html">http://stat545-ubc.github.io/bit001\_dplyr-cheatsheet.html</a>. The dataset is used to illustrate data merging / joining. Description provided in attr(superheroes, "description")

test\_specs

Add interaction terms to list of test variables if needed

### **Description**

Add interaction terms to list of test variables if needed

### Usage

```
test_specs(test_var, int_var)
```

#### **Arguments**

test\_var List of variables to use for testing for regression or glm\_reg

int\_var Interaction terms specified

#### **Details**

See http://vnijs.github.io/radiant/quant/regression.html for an example in Radiant

### Value

A vector of variables names to test

# **Examples**

```
test_specs("a", c("a:b", "b:c"))
```

the\_table

Function to calculate the PW and IW table for conjoint

### **Description**

Function to calculate the PW and IW table for conjoint

# Usage

```
the_table(model, dat, indep_var)
```

# Arguments

model Tidied model results (broom) output from conjoint passed on by summary.conjoint

dat Conjoint data

indep\_var Independent variables used in the conjoint regression

titanic 111

#### **Details**

See http://vnijs.github.io/radiant/marketing/conjoint.html for an example in Radiant

#### See Also

```
conjoint to generate results
summary.conjoint to summarize results
plot.conjoint to plot results
```

### **Examples**

```
result <- conjoint(dataset = "mp3", dep_var = "Rating", indep_var = "Memory:Shape")
the_table(result$model, result$dat, result$indep_var)</pre>
```

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")

titanic\_pred

Predict survival

### **Description**

Predict survival

### Usage

```
data(titanic_pred)
```

### **Format**

A data frame with 6 rows and 3 variables

### **Details**

Prediction data.frame for glm\_reg based on the Titanic dataset

var\_check

toothpaste

Toothpaste attitudes

### **Description**

Toothpaste attitudes

### Usage

```
data(toothpaste)
```

### **Format**

A data frame with 60 rows and 10 variables

### **Details**

Attitudinal data on toothpaste for 60 consumers. Description provided in attr(toothpaste,"description")

var\_check

Check if main effects for all interaction effects are included in the model If ':' is used to select a range \_indep\_var\_ is updated

# **Description**

Check if main effects for all interaction effects are included in the model If ':' is used to select a range \_indep\_var\_ is updated

#### Usage

```
var_check(iv, cn, intv = "")
```

### **Arguments**

iv List of independent variables provided to \_regression\_ or \_glm\_

cn Column names for all independent variables in \_dat\_

intv Interaction terms specified

#### Details

See http://vnijs.github.io/radiant/quant/regression.html for an example in Radiant

### Value

'vars' is a vector of right-hand side variables, possibly with interactions, 'iv' is the list of independent variables, and into are interaction terms

```
var_check("a:d", c("a","b","c","d"))
var_check(c("a", "b"), c("a", "b"), "a:c")
```

var\_rm

var\_rm

 $Variance\ with\ na.rm = TRUE$ 

# Description

Variance with na.rm = TRUE

# Usage

```
var_rm(x)
```

# **Arguments**

Х

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

114 visualize

### **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 = "", type = "hist", facet_row = ".",
  facet_col = ".", color = "none", fill = "none", bins = 10,
  smooth = 1, 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 $r_d$ 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")
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 (not accessible in Radiant)
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.

win\_launcher 115

#### **Details**

See http://vnijs.github.io/radiant/base/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 = "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")
```

win\_launcher

Create a launcher and updater for Windows (.bat)

#### **Description**

Create a launcher and updater for Windows (.bat)

#### Usage

```
win_launcher(app = c("analytics", "marketing", "quant", "base"))
```

### **Arguments**

app

App to run when the desktop icon is double-clicked ("analytics", "marketing", "quant", or "base"). Default is "analytics"

#### **Details**

On Windows a file named 'radiant.bat' and one named 'update\_radiant.bat' will be put on the desktop. Double-click the file to launch the specified Radiant app or update Radiant to the latest version

```
if (interactive()) {
   if (Sys.info()["sysname"] == "Windows") {
     win_launcher()
     fn <- paste0(Sys.getenv("USERPROFILE") ,"/Desktop/radiant.bat")
     if (!file.exists(fn))
        stop("Windows launcher not created")
     else
        unlink(fn)
   }
}</pre>
```

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