# Package 'radiant'

March 31, 2016

```
Title Business Analytics using R and Shiny
Version 0.4.60
Date 2016-3-26
Description A platform-independent browser-based interface for business
      analytics in R, based on the Shiny package.
Depends R (>= 3.2.0),
      magrittr (>= 1.5),
      ggplot2 (>= 2.0.0),
      lubridate (>= 1.5.0),
      tidyr (>= 0.4.1),
      dplyr (>= 0.4.3)
Imports DiagrammeR(>= 0.8.3),
      car (>= 2.1.1),
      MASS (>= 7.3),
      gridExtra (>= 2.0.0),
      AlgDesign (>= 1.1.7.3),
      psych (>= 1.5.8),
      GPA rotation (>= 2014.11.1),
      wordcloud (\geq 2.5),
      markdown (>= 0.7.7),
      knitr (>= 1.12.22),
      ggdendro (>= 0.1.17),
      broom (>= 0.4.0),
      pryr (>= 0.1.2),
      shiny (>= 0.13.1.9000),
      jsonlite (>= 0.9.17),
      shinyAce (>= 0.2.1),
      DT (>= 0.1.55),
      readr (>= 0.2.2),
      data.tree (>= 0.1.9),
      yam1 (>= 2.1.13),
      scales (>= 0.3.0),
      curl (>= 0.9.4),
      stringr (>= 1.0),
      nnet (>= 7.3.11),
      NeuralNetTools (>= 1.4.0),
      rstudioapi (>= 0.5),
      sandwich (>= 2.3.4)
```

2 R topics documented:

```
Suggests rmarkdown (>= 0.7),
devtools (>= 1.8.0),
testthat (>= 0.10.0),
covr (>= 1.2.0)
```

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

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

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LazyData true
RoxygenNote 5.0.1

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ann

Artificial Neural Networks

# Description

Artificial Neural Networks

# Usage

```
ann(dataset, rvar, evar, lev = "", size = 1, decay = 0.5, wts = "None",
  check = "", dec = 3, 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
rvar	The response variable in the logit (probit) model
evar	Explanatory variables in the model
lev	The level in the response variable defined as _success_
size	Number of units (nodes) in the hidden layer
decay	Paramater decay
wts	Weights to use in estimation
check	Optional output or estimation parameters. "vif" to show the multicollinearity 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
dec	Number of decimals to show
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/analytics/ann.html for an example in Radiant

8 as\_distance

#### Value

A list with all variables defined in ann as an object of class ann

#### See Also

```
summary.ann to summarize results
plot.ann to plot results
predict.ann for prediction
```

### **Examples**

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

as\_character

Wrapper for as.character

### Description

Wrapper for as.character

#### Usage

```
as_character(x)
```

#### **Arguments**

Х

Input vector

as\_distance

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

#### **Description**

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

### Usage

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

as\_dmy 9

### **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 n

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

#### Value

Date variable of class Date

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

10 as\_dmy\_hms

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

Х

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")
```

as\_duration 11

as\_duration  $\begin{tabular}{ll} \it Wrapper\ for\ lubridate's\ as. duration\ function.\ Result\ converted\ to\ numeric \\ \end{tabular}$ 

# 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

Input vector

as\_hm

Convert input in hour-minute format to time

# Description

Convert input in hour-minute format to time

# Usage

as\_hm(x)

#### **Arguments**

Χ

Input variable

#### Value

Time variable of class Period

12 as\_integer

#### **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**

Х

Input variable

as\_mdy 13

#### 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)
```

14 as\_mdy\_hms

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")
```

as\_numeric 15

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_numeric(c("1","2"))
```

as\_ymd

Convert input in year-month-day format to date

# Description

Convert input in year-month-day format to date

# Usage

```
as_ymd(x)
```

# Arguments

Х

Input variable

#### Value

Date variable of class Date

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

as\_ymd\_hms

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)
```

auc 17

auc

Area Under the Curve (AUC)

# Description

```
Area Under the Curve (AUC)
```

# Usage

```
auc(pred, rvar, lev)
```

# **Arguments**

pred Prediction or predictor rvar Response variable

lev The level in the response variable defined as \_success\_

# **Details**

See http://vnijs.github.io/radiant/analytics/performance.html for an example in Radiant

#### Value

AUC statistic

#### See Also

```
performance to calculate results
summary.performance to summarize results
plot.performance to plot results
```

# **Examples**

```
auc(mtcars$mpg, mtcars$vs, 1)
```

avengers

Avengers

# Description

Avengers

# Usage

```
data(avengers)
```

18 changedata

#### **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**

Х

Input variable

#### Value

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

changedata

Change data

# Description

Change data

# Usage

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

# **Arguments**

dataset Name of the dataframe to change vars New variables to add to the data.frame

var\_names Names for the new variables to add to the data.frame

#### Value

None

city 19

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")

ci\_label

Labels for confidence intervals

# Description

Labels for confidence intervals

# Usage

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

# Arguments

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

# Value

A character vector with labels for a confidence interval

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

20 clean\_loadings

ci_per	·c
CT_PCI	_

Values at confidence levels

#### **Description**

Values at confidence levels

#### Usage

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

#### **Arguments**

dat Data

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

cl Confidence level

#### Value

A vector with values at a confidence level

#### **Examples**

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

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

combinedata 21

#### **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 = "", add = "", type = "inner_join",
  name = "")
```

# **Arguments**

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

element in an r data list from Radiant

cmb\_dataset Dataset name (string) to combine with 'dataset'. This can be a dataframe in the

global environment or an element in an r\_data list from Radiant

by Variables used to combine 'dataset' and 'cmb\_dataset'

add Variables to add from 'cmb\_dataset'

type The main bind and join types from the dplyr package are provided. **inner\_join** 

returns all rows from x with matching values in y, and all columns from x and y. If there are multiple matches between x and y, all match combinations are returned. **left\_join** returns all rows from x, and all columns from x and y. If there are multiple matches between x and y, all match combinations are returned. **right\_join** is equivalent to a left join for datasets y and x. **full\_join** combines two datasets, keeping rows and columns that appear in either. **semi\_join** returns all rows from x with matching values in y, keeping just columns from x. A semi join differs from an inner join because an inner join will return one row of x for each matching row of y, whereas a semi join will never duplicate rows of x. **anti\_join** returns all rows from x without matching values in y, keeping only columns from x. **bind\_rows** and **bind\_cols** are also included, as are **intersect**, **union**, and **setdiff**. See <a href="http://vnijs.github.io/radiant/base/combine">http://vnijs.github.io/radiant/base/combine</a>.

html 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'

22 compare\_means

#### **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")
avengers %>% combinedata(superheroes, add = "publisher", 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, comb = "",
  adjust = "none", test = "t", dec = 3, 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 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 independent ("independent") or not ("paired")
alternative	The alternative hypothesis ("two.sided", "greater" or "less")
conf_lev	Span of the confidence interval
comb	Combinations to evaluate
adjust	Adjustment for multiple comparisons ("none" or "bonf" for Bonferroni)
test	T-test ("t") or Wilcox ("wilcox")
dec	Number of decimals to show
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

compare\_props 23

#### 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")
```

compare\_props

Compare proportions across groups

### **Description**

Compare proportions across groups

# Usage

```
compare_props(dataset, var1, var2, levs = "", alternative = "two.sided",
  conf_lev = 0.95, comb = "", adjust = "none", dec = 3,
  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 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
comb	Combinations to evaluate
adjust	Adjustment for multiple comparisons ("none" or "bonf" for Bonferroni)
dec	Number of decimals to show
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

24 confint\_robust

#### 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")

confint\_robust

Confidence interval for robust estimators

# Description

Confidence interval for robust estimators

#### Usage

```
confint_robust(object, parm, level = 0.95, vcov = NULL, ...)
```

#### **Arguments**

object	A fitted model object
parm	A specification of which parameters are to be given confidence intervals, either a vector of numbers or a vector of names. If missing, all parameters are considered
level	The confidence level required
vcov	Covariance matrix generated by, e.g., sandwich::vcovHC
	Additional argument(s) for methods

conjoint 25

#### **Details**

Wrapper for confint.default with robust standard errors. See http://stackoverflow.com/a/3820125/1974918

# Description

Conjoint analysis

# Usage

```
conjoint(dataset, rvar, evar, 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
rvar	The response variable (e.g., profile ratings)
evar	Explanatory variables in the regression
reverse	Reverse the values of the response variable ('rvar')
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", rvar = "Rating", evar = "Memory:Shape")
result <- mp3 %>% conjoint(rvar = "Rating", evar = "Memory:Shape")
```

26 conjoint\_profiles

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
```

copy\_all 27

copy\_all

Source all package functions

#### **Description**

Source all package functions

#### Usage

```
copy_all(.from)
```

#### **Arguments**

.from

The package to pull the function from

#### **Details**

Equivalent of source with local=TRUE for all package functions. Adapted from functions by smbache, author of the import package. See <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>

28 correlation

#### **Examples**

```
copy_from(radiant, getdata)
```

copy\_imported

Import all functions that a package imports for use with Shiny

# **Description**

Import all functions that a package imports for use with Shiny

#### Usage

```
copy_imported(.from)
```

#### **Arguments**

.from

The package to pull the function from

#### **Examples**

```
## Not run:
copy_imported(radiant)
## End(Not run)
```

correlation

Calculate correlations for two or more variables

#### **Description**

Calculate correlations for two or more variables

#### Usage

```
correlation(dataset, vars, method = "pearson", dec = 2, 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 Type of correlations to calculate. Options are "pearson", "spearman", and "kendall".

"pearson" is the default

dec Number of decimals to show

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

cross\_tabs 29

#### **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
```

#### **Examples**

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

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
```

30 crs

# **Examples**

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

crs

Collaborative Filtering

# Description

Collaborative Filtering

# Usage

```
crs(dataset, id, prod, pred, rate, name = "pred", 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
id	String with name of the variable containing user ids
prod	String with name of the variable with product ids
pred	Products to predict for
rate	String with name of the variable with product ratings
name	Name for the prediction variable
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/analytics/crs.html for an example in Radiant

#### Value

A data.frame with the original data and a new column with predicted ratings

cv 31

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))
```

dfprint

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

# Description

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

# Usage

```
dfprint(tbl, dec = 3, perc = FALSE)
```

# Arguments

tbl Data.frame

dec Number of decimal places

perc Display numbers as percentages (TRUE or FALSE)

### Value

Data.frame for printing

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

32 diamonds

dfround

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

# Description

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

# Usage

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

#### **Arguments**

tbl Data.frame

dec Number of decimal places

#### Value

Data.frame for viewing

# **Examples**

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

diamonds

Diamond prices

# Description

Diamond prices

# Usage

```
data(diamonds)
```

# **Format**

A data frame with 3000 rows and 10 variables

# Details

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

doe 33

doe

Create (partial) factorial design

#### **Description**

Create (partial) factorial design

#### Usage

```
doe(factors, int = "", trials = NA, seed = NA)
```

#### **Arguments**

factors Categorical variables used as input for design

int Vector of interaction terms to consider when generating design

trials Number of trial to create. If NA then all feasible designs will be considered until

a design with perfect D-efficiency is found

seed Random seed to use as the starting point

#### **Details**

See http://vnijs.github.io/radiant/analytics/doe.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**

```
"price; $10; $13; $16\nfood; popcorn; gourmet; no food" %>% doe
```

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

34 dtree

#### Value

Logical. TRUE is there is variability

# **Examples**

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

dtree

Create a decision tree

# Description

Create a decision tree

# Usage

```
dtree(y1, opt = "max")
```

# Arguments

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

opt Find the maximum ("max") or minimum ("min") value for each decision node

# **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 35

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

y1

A yaml string

#### **Details**

See  $\verb|http://vnijs.github.io/radiant/base/dtree.html| for an example in Radiant| | Rad$ 

#### Value

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

#### 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 = c("mean_rm", "sd_rm"),
  tabfilt = "", tabsort = "", data_filter = "", shiny = FALSE)
```

36 factorizer

#### **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")

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

#### **Examples**

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

factorizer

Convert character to factors as needed

#### **Description**

Convert character to factors as needed

# Usage

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

#### **Arguments**

dat Data.frame

safx Values to levels ratio

 $ff_design$  37

#### 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
```

filterdata

Filter data with user-specified expression

#### **Description**

Filter data with user-specified expression

#### Usage

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

## Arguments

dat Data.frame to filter

filt Filter expression to apply to the specified dataset (e.g., "price > 10000" if dataset

is "diamonds")

#### Value

Filtered data.frame

38 find\_max

find\_dropbox

Find a users dropbox directory

## Description

Find a users dropbox directory

# Usage

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

## **Arguments**

folder

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

## Value

Path to users personal dropbox directory

find\_max

Find maxium value of a vector

## Description

Find maxium value of a vector

## Usage

```
find_max(var, val = "")
```

## Arguments

var Variable to find the maximum for

val Variable to find the value for at the maxium of var

#### Value

Value of val at the maximum of var

find\_min 39

find\_min

Find minimum value of a vector

#### **Description**

Find minimum value of a vector

#### Usage

```
find_min(var, val = "")
```

## **Arguments**

var Variable to find the minimum for

val Variable to find the value for at the maxium of var

#### Value

Value of val at the minimum of var

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
```

40 full\_factor

#### **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")

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")
```

getclass 41

getclass	Get variable class
----------	--------------------

# Description

Get variable class

# Usage

```
getclass(dat)
```

## Arguments

dat

Dataset to evaluate

#### **Details**

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

#### Value

Vector with class information for each variable

## **Examples**

```
getclass(mtcars)
```

getdata

Get data for analysis functions

# Description

Get data for analysis functions

## Usage

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

## **Arguments**

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

## Value

Data.frame with specified columns and rows

glm\_reg

|--|

# 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)	
8	· · · · · · · · · · · · · · · · · · ·	

# Description

Generalized linear models (GLM)

# Usage

```
glm_reg(dataset, rvar, evar, lev = "", link = "logit", int = "",
  wts = "None", check = "", dec = 3, 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
rvar	The response variable in the logit (probit) model
evar	Explanatory variables in the model
lev	The level in the response variable defined as _success_
link	Link function for glm ('logit' or 'probit'). 'logit' is the default
int	Interaction term to include in the model
wts	Weights to use in estimation
check	Optional estimation parameters. "standardize" to output standardized coefficient estimates. "stepwise" to apply step-wise selection of variables
dec	Number of decimals to show
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")

goodness 43

#### **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>
```

goodness	Evaluate if sample data for a categorical variable is consistent with a
	hypothesized distribution

# Description

Evaluate if sample data for a categorical variable is consistent with a hypothesized distribution

## Usage

```
goodness(dataset, var, p = c(), 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	A categorical variable
р	Hypothesized distribution (either a numeric or character vector). If unspecified, defaults to an even distribution
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/goodness.html for an example in Radiant

#### Value

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

44 hier\_clus

#### See Also

```
summary.goodness to summarize results plot.goodness to plot results
```

#### **Examples**

```
result <- goodness("newspaper", "Income")</pre>
```

hier\_clus

Hierarchical cluster analysis

# Description

Hierarchical cluster analysis

### Usage

```
hier_clus(dataset, vars, distance = "sq.euclidian", method = "ward.D",
    max_cases = 1000, 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 Vector of variables to include in the analysis

distance Distance method Method

max\_cases Maximum number of cases allowed (default is 1000)

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
```

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

indexr 45

indexr

Find index corrected for missing values and filters

## Description

Find index corrected for missing values and filters

## Usage

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

## Arguments

dataset Dataset name
vars Variables to select
filt Data filter

install\_webshot

Install webshot and phantomjs

## Description

Install webshot and phantomjs

## Usage

```
install_webshot()
```

inverse

Calculate inverse of a variable

# Description

Calculate inverse of a variable

## Usage

inverse(x)

#### **Arguments**

Х

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

iterms 47

#### Value

TRUE if string, else FALSE

# **Examples**

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

iterms

Create a vector of interaction terms

# Description

Create a vector of interaction terms

## Usage

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

# **Arguments**

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

#### Value

Character vector of interaction term labels

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

48 kmeans\_clus

#### 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 = "")
```

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

### 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
store.kmeans_clus to add cluster membership to the selected dataset
```

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

kurtosi 49

action from the psych package
ı

## Description

Exporting the kurtosi function from the psych package

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
```

50 lin\_launcher

level\_list

Generate list of levels and unique values

## Description

Generate list of levels and unique values

#### Usage

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

## Arguments

dat A data.frame

... Unquoted variable names to evaluate

## **Examples**

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

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

In 51

#### **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>
```

ln

Natural log

#### **Description**

Natural log

#### Usage

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

#### **Arguments**

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

#### Value

Natural log of vector

## **Examples**

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

loadcsv

Load a csv file with read.csv and read\_csv

## Description

Load a csv file with read.csv and read\_csv

## Usage

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

52 loadcsv\_url

# Arguments

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

## Value

Data.frame with (some) variables converted to factors

a csv file with from a url
----------------------------

# Description

Load a csv file with from a url

# Usage

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

# Arguments

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

## Value

Data.frame with (some) variables converted to factors

loadr 53

loadr

Load an rda or rds file and add it to the radiant data list  $(r\_data)$  if available

# Description

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

## Usage

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

## **Arguments**

fn File name and path as a string. Extension must be either rda or rds

objname Name to use for the data.frame. Defaults to the file name

#### Value

Data.frame in r\_data or in the calling environment

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

54 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**

app

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, dec = 3, search = "",
    searchCols = NULL, order = NULL)
```

make\_expl 55

#### **Arguments**

pvt Return value from pivotr

format Show Color bar ("color\_bar"), Heat map ("heat"), or None ("none")

perc Display numbers as percentages (TRUE or FALSE)

dec Number of decimals to show

search Global search. Used to save and restore state

searchCols Column search and filter. Used to save and restore state

order Column sorting. Used to save and restore state

#### **Details**

See http://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 fro	m 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

56 make\_funs

#### **Details**

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

#### See Also

```
pivotr to create the pivot-table using dplyr summary. pivotr to print a plain text table
```

## **Examples**

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

make\_funs

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

## Description

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

#### Usage

```
make_funs(x)
```

## **Arguments**

х

List of functions as strings

#### Value

List of functions to pass to dplyr in formula form

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

make\_train 57

make\_train

Generate a variable used to selected a training sample

# Description

Generate a variable used to selected a training sample

## Usage

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

## Arguments

n Number (or fraction) of observations to label as training

nr Number of rows in the dataset

## Value

0/1 variables for filtering

#### **Examples**

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

max\_rm

 $Max\ with\ na.rm = TRUE$ 

# Description

Max with na.rm = TRUE

## Usage

```
max_rm(x)
```

# Arguments

Х

Input variable

#### Value

Maximum value

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

58 mds

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 = "")
```

# 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
```

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

mean\_rm 59

 ${\sf mean\_rm}$ 

Mean with na.rm = TRUE

# Description

Mean with na.rm = TRUE

## Usage

```
mean_rm(x)
```

# Arguments

Х

Input variable

#### Value

Mean value

# **Examples**

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

median\_rm

 $Median \ with \ na.rm = TRUE$ 

# Description

Median with na.rm = TRUE

# Usage

```
median_rm(x)
```

# Arguments

Χ

Input variable

## Value

Median value

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

60 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 61

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")
```

62 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

nrprint 63

nr	n	r٦	n	t
	Μ,			·

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

## Description

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

## Usage

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

## **Arguments**

X	Number or vector
sym	Symbol to use
dec	Number of decimal places
perc	Display number as a percentage

#### Value

Character (vector) in the desired format

## **Examples**

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

n\_missing

Number of missing values

#### **Description**

Number of missing values

## Usage

```
n_missing(x)
```

#### **Arguments**

Х

Input variable

p10

#### Value

number of missing values

# **Examples**

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

p05

 $5 th\ percentile$ 

## Description

5th percentile

# Usage

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

## **Arguments**

x Input variable

na.rm If TRUE missing values are removed before calculation

## Value

5th percentile

# **Examples**

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

p10

10th percentile

# Description

10th percentile

#### Usage

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

# Arguments

x Input variable

na.rm If TRUE missing values are removed before calculation

p25

#### Value

10th percentile

# **Examples**

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

p25

25th percentile

# Description

25th percentile

# Usage

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

## **Arguments**

x Input variable

na.rm If TRUE missing values are removed before calculation

## Value

25th percentile

# **Examples**

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

p75

75th percentile

# Description

75th percentile

#### Usage

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

# Arguments

x Input variable

na.rm If TRUE missing values are removed before calculation

66 p95

#### Value

75th percentile

# **Examples**

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

p90

90th percentile

# Description

90th percentile

# Usage

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

## **Arguments**

x Input variable

na.rm

If TRUE missing values are removed before calculation

## Value

90th percentile

# **Examples**

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

p95

95th percentile

# Description

95th percentile

#### Usage

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

# Arguments

x Input variable

na.rm If TRUE missing values are removed before calculation

performance 67

#### Value

95th percentile

## **Examples**

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

performance

Model performance

# Description

Model performance

# Usage

```
performance(dataset, pred, rvar, lev = "", qnt = 10, margin = 1,
  cost = 1, train = "", method = "xtile", 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
pred	Prediction or predictor
rvar	Response variable
lev	The level in the response variable defined as _success_
qnt	Number of bins to create
margin	Margin on each customer purchase
cost	Cost for each connection (e.g., email or mailing)
train	Use data from training ("Training"), validation ("Validation"), both ("Both"), or all data ("All") to evaluate model performance
method	Use either ntile or xtile to split the data (default is xtile)
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  $\label{lem:http://vnijs.github.io/radiant/analytics/performance.html} for an example in Radiant$ 

# Value

A list of results

## See Also

```
summary.performance to summarize results plot.performance to plot results
```

68 pivotr

#### **Examples**

```
result <- performance("titanic", c("age", "fare"), "survived")</pre>
```

pivotr

Create a pivot table using dplyr

## Description

Create a pivot table using dplyr

## Usage

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

## **Arguments**

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

#### **Details**

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

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

plot.ann 69

plot.ann

Plot method for the ann function

#### **Description**

Plot method for the ann function

#### Usage

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

#### **Arguments**

x Return value from annshiny Did the function call originate inside a shiny appfurther arguments passed to or from other methods

#### **Details**

See http://vnijs.github.io/radiant/analytics/ann.html for an example in Radiant

#### See Also

```
ann to generate results
summary.ann to summarize results
predict.ann for prediction
```

## **Examples**

```
result <- ann("titanic", "survived", c("pclass", "sex"), lev = "Yes")
plot(result, plots = c("imp", "net"))</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 = "scatter", shiny = FALSE, ...)
```

70 plot.compare\_props

#### **Arguments**

X	Return value from compare_means
plots	One or more plots ("bar", "density", "box", or "scatter")
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
```

#### **Examples**

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

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 = "bar", shiny = FALSE, ...)
```

# Arguments

x	Return value from compare_props
plots	One or more plots of proportions ("bar" or "dodge")
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\_props.html for an example in Radiant

#### See Also

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

plot.conjoint 71

#### **Examples**

```
result <- compare_props("titanic", "pclass", "survived")
plot(result, plots = c("bar","dodge"))</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, ...)
```

## **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
```

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

72 plot.cross\_tabs

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
```

#### **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, ...)
```

plot.crs 73

## **Arguments**

x	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 "row_perc", "col_perc", and "perc" for row, column, and table percentages respectively
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
```

## **Examples**

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

plot.crs

Plot method for the crs function

## Description

Plot method for the crs function

## Usage

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

# Arguments

x	Return value from crs
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/analytics/crs.html for an example in Radiant

74 plot.dtree

#### See Also

```
crs to generate results
summary.crs to summarize results
```

plot.dtree

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

X	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 75

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_factorshiny Did the function call originate inside a shiny appfurther 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","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

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

76 plot.glm\_predict

#### **Arguments**

x	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 predicitions 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

#### 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
```

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

plot.glm\_reg 77

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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 response variable with each explanatory 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

#### **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
```

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

78 plot.goodness

plot.goodness

Plot method for the goodness function

## **Description**

Plot method for the goodness function

# Usage

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

# Arguments

Х	Return value from goodness
check	Show plots for variable var. "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 "perc" for percentages
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/goodness for an example in Radiant

## See Also

```
goodness to calculate results summary.goodness to summarize results
```

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

plot.hier\_clus 79

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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 = 0.05,
    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

```
hier_clus to generate results
summary.hier_clus to summarize results
```

```
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
```

80 plot.mds

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_clusshiny Did the function call originate inside a shiny appfurther 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
store.kmeans_clus to add cluster membership to the selected dataset
```

## **Examples**

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

plot.mds

Plot method for the mds function

## **Description**

Plot method for the mds function

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

plot.performance 81

## **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.performance

Plot method for the performance function

## **Description**

Plot method for the performance function

# Usage

```
## $3 method for class 'performance'
plot(x, plots = c("lift", "gains"), shiny = FALSE,
...)
```

# Arguments

X	Return value from performance
plots	Plots to return
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/analytics/performance.html for an example in Radiant

82 plot.pivotr

#### See Also

```
performance to generate results summary.performance to summarize results
```

## **Examples**

```
performance("titanic", "age", "survived") %>% plot
performance("titanic", c("age","fare"), "survived") %>% plot
performance("titanic", c("age","fare"), "survived", method = "xtile") %>% plot
performance("titanic", c("age","fare"), "survived") %>% summary
```

plot.pivotr

Plot method for the pivotr function

## **Description**

Plot method for the pivotr function

## Usage

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

## **Arguments**

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

## **Details**

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

#### See Also

```
pivotr to generate summaries
summary.pivotr to show summaries
```

plot.pmap 83

#### **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**

X	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

#### See Also

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

84 plot.prob\_binom

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

#### See Also

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

## **Examples**

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

plot.prob\_binom

Plot method for the probability calculator function (binomial)

## Description

Plot method for the probability calculator function (binomial)

## Usage

```
## S3 method for class 'prob_binom'
plot(x, type = "values", shiny = FALSE, ...)
```

## Arguments

type

X	Return value from	<pre>prob_binom</pre>
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shiny Did the function call originate inside a shiny app
... further arguments passed to or from other methods

Probabilities or values

plot.prob\_chisq 85

#### **Details**

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

plot.prob\_chisq

Plot method for the probability calculator (Chi-squared distribution)

## **Description**

Plot method for the probability calculator (Chi-squared distribution)

## Usage

```
## S3 method for class 'prob_chisq'
plot(x, type = "values", shiny = FALSE, ...)
```

#### **Arguments**

x Return value from prob\_chisq

type Probabilities or values

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/prob\_calc.html for an example in Radiant

plot.prob\_disc

Plot method for the probability calculator function (discrete)

#### **Description**

Plot method for the probability calculator function (discrete)

## Usage

```
## S3 method for class 'prob_disc'
plot(x, type = "values", shiny = FALSE, ...)
```

## **Arguments**

x Return value from prob\_disc

type Probabilities or values

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/prob\_calc.html for an example in Radiant

86 plot.prob\_fdist

#### **Examples**

```
result <- prob_disc(v = "5 6 7 8 9 10 11 ", p = ".1 .2 .3 .15 .1 .1 .05", pub = 0.95) plot(result, type = "probs")
```

plot.prob\_expo

Plot method for the probability calculator (Exponential distribution)

## **Description**

Plot method for the probability calculator (Exponential distribution)

## Usage

```
## S3 method for class 'prob_expo'
plot(x, type = "values", shiny = FALSE, ...)
```

# Arguments

x Return value from prob\_expo type Probabilities or values

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/prob\_calc.html for an example in Radiant

plot.prob\_fdist

*Plot method for the probability calculator (F-distribution)* 

# Description

Plot method for the probability calculator (F-distribution)

#### Usage

```
## S3 method for class 'prob_fdist'
plot(x, type = "values", shiny = FALSE, ...)
```

# Arguments

x Return value from prob\_fdist

type Probabilities or values

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/prob\_calc.html for an example in Radiant

plot.prob\_norm 87

plot.prob\_norm

Plot method for the probability calculator (normal)

#### **Description**

Plot method for the probability calculator (normal)

## Usage

```
## S3 method for class 'prob_norm'
plot(x, type = "values", shiny = FALSE, ...)
```

#### **Arguments**

x Return value from prob\_norm

type Probabilities or values

shiny Did the function call originate inside a shiny app
... further arguments passed to or from other methods

#### **Details**

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

plot.prob\_pois //

Plot method for the probability calculator function (Poisson distribu-

tion)

## Description

Plot method for the probability calculator function (Poisson distribution)

## Usage

```
## S3 method for class 'prob_pois'
plot(x, type = "values", shiny = FALSE, ...)
```

## **Arguments**

x Return value from prob\_pois

type Probabilities or values

shiny Did the function call originate inside a shiny app
... further arguments passed to or from other methods

## **Details**

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

88 plot.prob\_unif

plot.prob\_tdist

*Plot method for the probability calculator (t-distribution)* 

#### **Description**

Plot method for the probability calculator (t-distribution)

#### Usage

```
## S3 method for class 'prob_tdist'
plot(x, type = "values", shiny = FALSE, ...)
```

#### **Arguments**

x Return value from prob\_tdisttype Probabilities or values

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/prob\_calc.html for an example in Radiant

plot.prob\_unif

Plot method for the probability calculator (uniform)

#### **Description**

Plot method for the probability calculator (uniform)

## Usage

```
## S3 method for class 'prob_unif'
plot(x, type = "values", shiny = FALSE, ...)
```

## **Arguments**

x Return value from prob\_unif type Probabilities or values

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/prob\_calc.html for an example in Radiant

plot.regression 89

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 response variable with each explanatory variable. "dashboard" for a series of six plots that can be used to evaluate model fit visually. "resid_pred" to plot the explanatory variables against the model residuals. "coef" for a coefficient plot with adjustable confidence intervals. "leverage" to show leverage plots for each explanatory 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
```

90 plot.reg\_predict

#### **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
```

plot.repeater 91

#### **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 = "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 = "sum_rm",
    form = "", 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
form	A string with the formula to evaluate (e.g., "profit = demand * (price - cost)")
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

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

92 plot.single\_mean

## **Arguments**

X	Return value from simulater
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/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

plot.single\_prop 93

#### See Also

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

## **Examples**

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

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 = "bar", shiny = FALSE, ...)
```

## **Arguments**

X	Return value from single_prop
plots	Plots to generate. "bar" shows a bar chart of the data. The "simulate" chart 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 \ and \ radiant \$ 

# See Also

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

```
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>
```

94 pmap

pmap Attribute based brand maps	
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## Description

Attribute based brand maps

## Usage

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

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
```

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

predict.ann 95

predict.ann

Predict method for the ann function

## Description

Predict method for the ann function

## Usage

```
## S3 method for class 'ann'
predict(object, dataset, ...)
```

## Arguments

object Return value from ann
dataset Dataset to use for prediction

... further arguments passed to or from other methods

#### **Details**

See http://vnijs.github.io/radiant/analytics/ann.html for an example in Radiant

## See Also

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

predict.glm\_reg

Predict method for the glm\_reg function

## Description

Predict method for the glm\_reg function

```
## S3 method for class 'glm_reg'
predict(object, pred_vars = "", pred_data = "",
    pred_cmd = "", prn = 100, se = FALSE, ...)
```

96 predict.regression

# 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	Number of lines of prediction results to print. Nothing is printed if prn is 0. Use -1 to print all lines (default).
se	Logical that indicates if prediction standard errors should be calculated (default = FALSE)
	further arguments passed to or from other methods

#### **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

```
## S3 method for class 'regression'
predict(object, pred_vars = "", pred_data = "",
    pred_cmd = "", conf_lev = 0.95, prn = 100, se = TRUE, ...)
```

pre\_factor 97

#### **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	Number of lines of prediction results to print. Nothing is printed if prn is 0. Use -1 to print all lines (default).
se	Logical that indicates if prediction standard errors should be calculated (default = FALSE)
	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
```

## **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 = 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")

98 print.gtable

#### **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
```

## **Examples**

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

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

prob\_binom 99

prob_binom	Probability calculator for the binomial distribution (binomial)

## Description

Probability calculator for the binomial distribution (binomial)

## Usage

```
prob_binom(n, p, lb = NA, ub = NA, plb = NA, pub = NA, dec = 3)
```

## **Arguments**

n	Number of trials
р	Probability
1b	Lower bound on the number of successes
ub	Upper bound on the number of successes
plb	Lower probability bound
pub	Upper probability bound
dec	Number of decimals to show

## **Details**

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

prob_chisq	Probability calculator for the chi-squared distribution

# Description

Probability calculator for the chi-squared distribution

## Usage

```
prob_chisq(df, lb = NA, ub = NA, plb = NA, pub = NA, dec = 3)
```

# Arguments

df	Degrees of freedom
lb	Lower bound (default is -Inf)
ub	Upper bound (default is Inf)
plb	Lower probability bound
pub	Upper probability bound
dec	Number of decimals to show

## **Details**

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

prob\_expo

prob_disc Probability calculator for the discrete distribution (discrete)	prob_disc	Probability calculator for the discrete distribution (discrete)	
---	-----------	---	--

## Description

Probability calculator for the discrete distribution (discrete)

## Usage

```
prob_disc(v, p, lb = NA, ub = NA, plb = NA, pub = NA, dec = 3)
```

## **Arguments**

V	Values
р	Probabilities
1b	Lower bound on the number of successes
ub	Upper bound on the number of successes
plb	Lower probability bound
pub	Upper probability bound
dec	Number of decimals to show

## **Details**

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

prob_expo Probability calculator for the exponential distribution	
---	--

# Description

Probability calculator for the exponential distribution

## Usage

```
prob_expo(rate, 1b = NA, ub = NA, plb = NA, pub = NA, dec = 3)
```

## Arguments

rate	Rate
lb	Lower bound (default is -Inf)
ub	Upper bound (default is Inf)
plb	Lower probability bound
pub	Upper probability bound
dec	Number of decimals to show

## **Details**

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

prob\_fdist 101

prob_fdist Probability calculator for the F-distribution	
--	--

## Description

Probability calculator for the F-distribution

## Usage

```
prob_fdist(df1, df2, lb = NA, ub = NA, plb = NA, pub = NA, dec = 3)
```

## Arguments

df1	Degrees of freedom
df2	Degrees of freedom
1b	Lower bound (default is -Inf)
ub	Upper bound (default is Inf)
plb	Lower probability bound
pub	Upper probability bound
dec	Number of decimals to show

## **Details**

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

prob_norm	Probability calculator for the normal distribution	
prob_norm	1 roodottily calculator for the normal distribution	

# Description

Probability calculator for the normal distribution

# Usage

```
prob_norm(mean, stdev, lb = NA, ub = NA, plb = NA, pub = NA, dec = 3)
```

## Arguments

mean	Mean
stdev	Standard deviation
lb	Lower bound (default is -Inf)
ub	Upper bound (default is Inf)
plb	Lower probability bound
pub	Upper probability bound
dec	Number of decimals to show

## **Details**

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

prob\_tdist

prob_pois Probability calculator for the poisson distribution	
---	--

## Description

Probability calculator for the poisson distribution

## Usage

```
prob_pois(lambda, lb = NA, ub = NA, plb = NA, pub = NA, dec = 3)
```

## Arguments

lambda	Rate
lb	Lower bound (default is -Inf)
ub	Upper bound (default is Inf)
plb	Lower probability bound
pub	Upper probability bound
dec	Number of decimals to show

#### **Details**

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

prob_tdist	Probability calculator for the t distribution
------------	---

## **Description**

Probability calculator for the t distribution

# Usage

```
prob_tdist(df, mean = 0, stdev = 1, lb = NA, ub = NA, plb = NA,
    pub = NA, dec = 3)
```

# **Arguments** df

<b></b>	Degrees of meetical
mean	Mean
stdev	Standard deviation
lb	Lower bound (default is -Inf)
ub	Upper bound (default is Inf)
plb	Lower probability bound
pub	Upper probability bound
dec	Number of decimals to show

Degrees of freedom

# **Details**

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

prob\_unif 103

prob_unif	Probability calculator for the uniform distribution
p. 00_a	Tree de ting concession of the ting of the

## **Description**

Probability calculator for the uniform distribution

## Usage

```
prob_unif(min, max, lb = NA, ub = NA, plb = NA, pub = NA, dec = 3)
```

## **Arguments**

min	Minmum value
max	Maximum value
lb	Lower bound
ub	Upper bound
plb	Lower probability bound
pub	Upper probability bound
dec	Number of decimals to show

## **Details**

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

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>

104 radiant\_base

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")
}
```

radiant\_analytics

Launch Radiant - Analytics as an Rstudio addin

## Description

Launch Radiant - Analytics as an Rstudio addin

## Usage

```
radiant_analytics()
```

radiant\_base

Launch Radiant - Base as an Rstudio addin

## Description

Launch Radiant - Base as an Rstudio addin

```
radiant_base()
```

radiant\_marketing 105

radiant\_marketing

Launch Radiant - Marketing as an Rstudio addin

## Description

Launch Radiant - Marketing as an Rstudio addin

# Usage

```
radiant_marketing()
```

radiant\_quant

Launch Radiant - Quant as an Rstudio addin

## **Description**

Launch Radiant - Quant as an Rstudio addin

## Usage

radiant\_quant()

recode

Exporting the recode function from the car package

# Description

Exporting the recode function from the car package

regression

Linear regression using OLS

# Description

Linear regression using OLS

```
regression(dataset, rvar, evar, int = "", check = "", dec = 3,
  data_filter = "")
```

106 repeater

## **Arguments**

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an $r$ _data list from Radiant
rvar	The response variable in the regression
evar	Explanatory variables in the regression
int	Interaction terms to include in the model
check	"standardize" to see standardized coefficient estimates. "stepwise" to apply stepwise selection of variables in estimation
dec	Number of decimals to show
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
```

# **Examples**

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

repeater

Repeat simulation

# Description

Repeat simulation

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

rndnames 107

## **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 <code>listofrandomnames.com</code>. Description provided in attr(rndnames,"description")

108 sample\_size

san			
		S	

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, conf_lev = 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
conf_lev	Confidence level
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>
```

sample\_size\_comp 109

sample_size_comp	Sample size calculation for comparisons
Sample_Size_comp	sample size calculation for comparisons

# Description

Sample size calculation for comparisons

## Usage

```
sample_size_comp(type, n = NULL, p1 = NULL, p2 = NULL, delta = NULL,
sd = NULL, conf_lev = NULL, power = NULL, ratio = 1,
alternative = "two.sided")
```

## **Arguments**

type	Choose "mean" or "proportion"
n	Sample size
p1	Proportion 1 (only used when "proportion" is selected)
p2	Proportion 2 (only used when "proportion" is selected)
delta	Difference in means between two groups (only used when "mean" is selected)
sd	Standard deviation (only used when "mean" is selected)
conf_lev	Confidence level
power	Power
ratio	Sampling ratio (n1 / n2)
alternative	Two or one sided test

### **Details**

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

### Value

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

## See Also

```
summary.sample_size_comp to summarize results
```

110 saver

sampling

Simple random sampling

### **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>
```

saver

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

## Description

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

## Usage

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

save\_factors 111

## **Arguments**

objname Name of the data.frame

file File name and path as a string. Extension must be either rda or rds

#### Value

Data.frame in r\_data

save\_factors

Deprecated function to store factor loadings

## Description

Deprecated function to store factor loadings

## Usage

```
save_factors(object, ..., name = "")
```

## **Arguments**

object Return value from full\_factor

... Additional arguments

name Name of factor score variables

### See Also

Use store.full\_factor instead

save\_membership

Deprecated function to store cluster membership

### **Description**

Deprecated function to store cluster membership

### Usage

```
save_membership(object, ..., name = "")
```

### **Arguments**

object Return value from kmeans\_clus

... Additional arguments

name Name of cluster membership variable

#### See Also

Use store.kmeans\_clus instead

112 sdw

sdp\_rm

 $Standard\ deviation\ for\ the\ population\ na.rm = TRUE$ 

## Description

Standard deviation for the population na.rm = TRUE

## Usage

```
sdp_rm(x)
```

## Arguments

Х

Input variable

## Value

Standard deviation for the population

# Examples

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

sdw

Standard deviation of weighted sum of variables

# Description

Standard deviation of weighted sum of variables

## Usage

```
sdw(...)
```

# Arguments

... A matched number of weights and stocks

## Value

A vector of standard deviation estimates

*sd\_rm* 113

sd\_rm

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

## Description

Standard deviation with na.rm = TRUE

# Usage

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

## **Arguments**

x Input variable

na.rm Remove NAs (TRUE or FALSE)

## Value

Standard deviation

## **Examples**

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

serr

Standard error

## Description

Standard error

### Usage

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

## **Arguments**

x Input variable

na.rm If TRUE missing values are removed before calculation

## Value

Standard error

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

114 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, ...)
```

sig\_stars 115

### **Arguments**

Data frame to add transformed variables toVariables used to evaluate row uniqueness

#### **Details**

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

### **Examples**

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

sig\_stars

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

### **Description**

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

## Usage

```
sig_stars(pval)
```

## Arguments

pval

Vector of p-values

## **Details**

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

## Value

A vector of stars

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

simulater simulater

simulater	Simulate data for decision analysis	

# Description

Simulate data for decision analysis

# Usage

```
simulater(const = "", lnorm = "", norm = "", unif = "", discrete = "",
binom = "", sequ = "", grid = "", data = "", form = "", seed = "",
name = "", nr = 1000, dat = NULL)
```

# **Arguments**

guments	
const	A string listing the constants to include in the analysis (e.g., "cost = 3; size = 4")
lnorm	A string listing the log-normally distributed random variables to include in the analysis (e.g., "demand 2000 1000" where the first number is the log-mean and the second is the log-standard deviation)
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
binom	A string listing the random variables with a binomail distribution to include in the analysis (e.g., "crash 100 .01") where the first number is the number of trials and the second is the probability of success)
sequ	A string listing the start and end for a sequence to include in the analysis (e.g., "trend 1 100 1"). The number of 'steps' is determined by the number of simulations.
grid	A string listing the start, end, and step for a set of sequences to include in the analysis (e.g., "trend 1 100 1"). The number of rows in the expanded will over ride the number of simulations
data	Name of a dataset to be used in the calculations
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 simulations
dat	Data list from previous simulation. Used by repeater function

sim\_cleaner 117

#### **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
```

# Examples

sim\_cleaner

Clean input command string

# Description

Clean input command string

# Usage

```
sim_cleaner(x)
```

### **Arguments**

Х

Input string

## Value

Cleaned string

sim\_summary

oim	onli	++~~
SIM	spli	tter

Split input command string

# Description

Split input command string

## Usage

```
sim_splitter(x, symbol = " ")
```

# Arguments

x Input string

symbol Symbol used to split the command string

### Value

Split input command string

sim\_summary

Print simulation summary

## Description

Print simulation summary

# Usage

```
sim_summary(dat, dc = getclass(dat), fun = "", dec = 4)
```

# Arguments

dat	Simulated data
dc	Variable classes
fun	Summary function to apply

dec Number of decimals to show

single\_mean 119

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, dec = 3, 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
dec	Number of decimals to show
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")
```

120 single\_prop

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, dec = 3, 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
dec	Number of decimals to show
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
```

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

skew 121

skew

Exporting the skew function from the psych package

# Description

Exporting the skew function from the psych package

square

Calculate square of a variable

## Description

Calculate square of a variable

# Usage

```
square(x)
```

## Arguments

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) )
```

122 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**

Х

Input variable

### Value

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

store 123

store

Method to store variables in a dataset in Radiant

## Description

Method to store variables in a dataset in Radiant

## Usage

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

### **Arguments**

object Object of relevant class that has required information to store

... Additional arguments

store.ann

Store predicted values generated in the ann function

## Description

Store predicted values generated in the ann function

## Usage

```
## S3 method for class 'ann'
store(object, ..., data = "", name = "predict_ann")
```

## **Arguments**

object Return value from predict.nnet

... Additional arguments

data Dataset name

name Variable name assigned to the predicted values

### **Details**

 $See \ http://vnijs.github.io/radiant/analytics/ann.html\ for\ an\ example\ in\ Radiant$ 

124 store.glm\_predict

store.full\_factor

Store factor scores to active dataset

### **Description**

Store factor scores to active dataset

#### Usage

```
## S3 method for class 'full_factor'
store(object, ..., name = "")
```

### **Arguments**

object Return value from full\_factor

... Additional arguments

name Name of factor score variables

#### **Details**

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

#### See Also

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

## **Examples**

```
## Not run:
result <- full_factor("diamonds",c("price","carat","table"))
store(result)
head(diamonds)
## End(Not run)</pre>
```

store.glm\_predict

Store predicted values generated in the glm\_reg function

### **Description**

Store predicted values generated in the glm\_reg function

# Usage

```
## S3 method for class 'glm_predict'
store(object, ..., name = "pred_glm")
```

store.glm\_reg 125

### **Arguments**

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

... Additional arguments. Must include data or dataset name (e.g., data = mtcars or

data = "mtcars")

name Variable name assigned to the residuals or predicted values

#### **Details**

```
Use store.glm_predict or store.glm_reg instead
See http://vnijs.github.io/radiant/quant/glm_reg.html for an example in Radiant
```

store.glm\_reg

Store residuals from a model generated in the glm\_reg function

### **Description**

Store residuals from a model generated in the glm\_reg function

### Usage

```
## S3 method for class 'glm_reg'
store(object, ..., name = "residuals_glm")
```

### **Arguments**

object Return value from glm\_reg
... Additional arguments

name Variable name(s) assigned to predicted values

## **Details**

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

store.kmeans\_clus

Add a cluster membership variable to the active dataset

#### **Description**

Add a cluster membership variable to the active dataset

## Usage

```
## S3 method for class 'kmeans_clus'
store(object, ..., name = "")
```

126 store.pmap

### **Arguments**

object Return value from kmeans\_clus

... Additional arguments

name Name of cluster membership variable

#### **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
```

### **Examples**

```
## Not run:
result <- kmeans_clus("shopping", vars = c("v1:v6"))
store.kmeans_clus(result)
head(shopping)
## End(Not run)</pre>
```

store.pmap

Store factor scores from attribute based perceptual map

## Description

Store factor scores from attribute based perceptual map

## Usage

```
## S3 method for class 'pmap'
store(object, ..., name = "")
```

### **Arguments**

object Return value from pmap
... Additional arguments

name Name of factor score variables

### See Also

```
Use store.full_factor instead
```

store.regression 127

store.regression

Store residuals from a model generated in the regression function

### **Description**

Store residuals from a model generated in the regression function

## Usage

```
## S3 method for class 'regression'
store(object, ..., name = "residuals_reg")
```

### Arguments

object Return value from regression

... Additional arguments

name Variable name(s) assigned to predicted values

### **Details**

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

store.reg\_predict

Store predicted values generated in the regression function

### **Description**

Store predicted values generated in the regression function

## Usage

```
## S3 method for class 'reg_predict'
store(object, ..., name = "pred_reg")
```

#### **Arguments**

object Return value from predict.regression

... Additional arguments. Must include data or dataset name (e.g., data = mtcars or

data = "mtcars")

name Variable name(s) assigned to predicted values

#### **Details**

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

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store\_ann

Deprecated function to store predictions from an ANN

### **Description**

Deprecated function to store predictions from an ANN

## Usage

```
store_ann(object, ..., data = "", name = "predict_ann")
```

### **Arguments**

object Return value from predict.nnet

... Additional arguments

data Dataset name

name Variable name assigned to the predicted values

 $store\_crs$ 

Store predicted values generated in the crs function

## Description

Store predicted values generated in the crs function

### Usage

```
store_crs(pred, data, name = "pred_crs")
```

## **Arguments**

pred Return value from predict.nnet

data Dataset name

name Variable name assigned to the predicted values

### **Details**

See http://vnijs.github.io/radiant/analytics/crs.html for an example in Radiant

store\_glm 129

store_glm	Deprecated function to store logistic regression residuals and predic- tions
	110113

#### **Description**

Deprecated function to store logistic regression residuals and predictions

### 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**

```
Use store.glm_predict or store.glm_reg instead
See http://vnijs.github.io/radiant/quant/glm_reg.html for an example in Radiant
```

store\_reg

Deprecated function to store regression residuals and predictions

## Description

Deprecated function to store regression residuals and predictions

### Usage

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

# Arguments

object Return value from regression or predict.regression

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**

 $Use \ store.reg\_predict \ or \ store.regression \ instead$ 

summary.ann

Summary method for the ann function

## Description

Summary method for the ann function

### Usage

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

### **Arguments**

object Return value from ann

... further arguments passed to or from other methods

#### **Details**

 $See \ http://vnijs.github.io/radiant/analytics/ann.html \ for \ an \ example \ in \ Radiant$ 

#### See Also

```
ann to generate esults
plot.ann to plot results
predict.ann for prediction
```

## **Examples**

```
result <- ann("titanic", "survived", "pclass", lev = "Yes")
summary(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, show = FALSE, ...)
```

# Arguments

object Return value from compare\_means

show Show additional output (i.e., t.value, df, and confidence interval)

... 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
```

#### **Examples**

```
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)
```

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, show = FALSE, ...)
```

### Arguments

object Return value from compare\_props
show Show additional output (i.e., chisq.value, df, and confidence interval)
... 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
```

```
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", rvar = "Rating", evar = "Memory:Shape")
summary(result, mc_diag = TRUE)
mp3 %>% conjoint(rvar = "Rating", evar = "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, ...)
```

summary.correlation\_ 133

### **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

### **Examples**

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

134 summary.cross\_tabs

#### 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 = "", ...)
```

## **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
```

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

summary.crs 135

summary.crs

Summary method for Collaborative Filter

### **Description**

Summary method for Collaborative Filter

#### Usage

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

## **Arguments**

object Return value from simulater

... further arguments passed to or from other methods

### **Details**

See http://vnijs.github.io/radiant/analytics/crs.html for an example in Radiant

### See Also

```
crs to generate the results
plot.crs to plot results
```

summary.doe

Summary method for doe function

### **Description**

Summary method for doe function

## Usage

```
## S3 method for class 'doe'
summary(object, eff = TRUE, part = TRUE, full = TRUE, ...)
```

### **Arguments**

```
object Return value from conjoint_profiles

eff If TRUE print efficiency output

part If TRUE print partial factorial

full If TRUE print full factorial

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

### **Details**

See http://vnijs.github.io/radiant/analytics/doe.html for an example in Radiant

136 summary.explore

#### See Also

doe to calculate results

#### **Examples**

```
"price; $10; $13; $16\nfood; popcorn; gourmet; no food" %>% doe %>% summary
```

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
```

summary.explore

Summary method for the explore function

# Description

Summary method for the explore function

## Usage

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

summary.full\_factor 137

### **Arguments**

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

#### **Details**

See http://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
```

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, ...)
```

## **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

138 summary.glm\_reg

#### 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. "vif" to show multicollinearity diagnostics. "confint" to show coefficient confidence interval estimates. "odds" to show odds ratios and 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

#### **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
```

summary.goodness 139

#### **Examples**

```
result <- glm_reg("titanic", "survived", "pclass", lev = "Yes")
summary(result, test_var = "pclass")
res <- glm_reg("titanic", "survived", c("pclass", "sex"), int="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.goodness

Summary method for the goodness function

## Description

Summary method for the goodness function

#### Usage

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

### **Arguments**

object

Return value from goodness

check

Show table(s) for the selected variable (var). "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)

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

### **Details**

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

#### See Also

```
goodness to calculate results plot.goodness to plot results
```

```
result <- goodness("newspaper", "Income", c(.3, .7))
summary(result, check = c("observed", "expected", "chi_sq"))
newspaper %>% goodness("Income", c(.3, .7)) %>% summary("observed")
```

summary.kmeans\_clus

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

```
hier_clus to generate results
plot.hier_clus to plot results
```

### **Examples**

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

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 Return value from kmeans\_clus

... further arguments passed to or from other methods

summary.mds 141

#### **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
store.kmeans_clus 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, ...)
```

### **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
```

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

142 summary.pivotr

summary.performance

Summary method for the performance function

### **Description**

Summary method for the performance function

## Usage

```
## S3 method for class 'performance'
summary(object, prn = TRUE, ...)
```

### **Arguments**

object Return value from performance
prn Print model performance results (default is TRUE)

... further arguments passed to or from other methods

#### **Details**

See http://vnijs.github.io/radiant/analytics/performance.html for an example in Radiant

### See Also

```
performance to summarize results plot.performance to plot results
```

#### **Examples**

```
performance("titanic", "age", "survived") %>% summary
performance("titanic", c("age", "fare"), "survived") %>% summary
```

summary.pivotr

Summary method for pivotr

### **Description**

Summary method for pivotr

## Usage

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

summary.pmap 143

## **Arguments**

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

#### **Details**

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

#### See Also

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

#### **Examples**

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

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
```

144 summary.pre\_factor

#### **Examples**

```
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
```

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
```

```
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.prob\_binom 145

summary.prob\_binom

Summary method for the probability calculator function

### Description

Summary method for the probability calculator function

# Usage

```
## S3 method for class 'prob_binom'
summary(object, type = "values", ...)
```

### Arguments

object Return value from prob\_binom

type Probabilities or values

... further arguments passed to or from other methods

# **Details**

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

summary.prob\_chisq

Summary method for the probability calculator function (Chi-squared distribution)

### **Description**

Summary method for the probability calculator function (Chi-squared distribution)

### Usage

```
## S3 method for class 'prob_chisq'
summary(object, type = "values", ...)
```

# **Arguments**

object Return value from prob\_chisq

type Probabilities or values

... further arguments passed to or from other methods

#### **Details**

146 summary.prob\_expo

summary.prob\_disc

Summary method for the probability calculator function (discrete)

# Description

Summary method for the probability calculator function (discrete)

### Usage

```
## S3 method for class 'prob_disc'
summary(object, type = "values", ...)
```

### **Arguments**

object Return value from prob\_disc type Probabilities or values

... further arguments passed to or from other methods

### **Details**

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

### **Examples**

```
result <- prob_disc(v = "5 6 7 8 9 10 11 ", p = ".1 .2 .3 .15 .1 .1 .05", pub = 0.95) summary(result, type = "probs")
```

summary.prob\_expo

Summary method for the probability calculator function (Exponential distribution)

### **Description**

Summary method for the probability calculator function (Exponential distribution)

### Usage

```
## S3 method for class 'prob_expo'
summary(object, type = "values", ...)
```

### **Arguments**

object Return value from prob\_expo

type Probabilities or values

... further arguments passed to or from other methods

### **Details**

summary.prob\_fdist 147

summary.prob\_fdist Summary method for the probability calculator function (F-distribution)

### **Description**

Summary method for the probability calculator function (F-distribution)

### Usage

```
## S3 method for class 'prob_fdist'
summary(object, type = "values", ...)
```

### **Arguments**

object Return value from prob\_fdist

type Probabilities or values

... further arguments passed to or from other methods

### **Details**

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

summary.prob\_norm

Summary method for the probability calculator function (normal)

### **Description**

Summary method for the probability calculator function (normal)

# Usage

```
## S3 method for class 'prob_norm'
summary(object, type = "values", ...)
```

# **Arguments**

object Return value from prob\_norm

type Probabilities or values

... further arguments passed to or from other methods

#### **Details**

148 summary.prob\_tdist

summary.prob_pois	Summary method for the probability calculator function (Poisson dis-
	tribution)

### **Description**

Summary method for the probability calculator function (Poisson distribution)

# Usage

```
## S3 method for class 'prob_pois'
summary(object, type = "values", ...)
```

### **Arguments**

object Return value from prob\_pois

type Probabilities or values

. . . further arguments passed to or from other methods

### **Details**

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

```
{\it summary.prob\_tdist} \qquad {\it Summary method for the probability calculator function (t-distribution)}
```

# **Description**

Summary method for the probability calculator function (t-distribution)

# Usage

```
## S3 method for class 'prob_tdist'
summary(object, type = "values", ...)
```

# Arguments

object Return value from prob\_tdist

type Probabilities or values

... further arguments passed to or from other methods

### **Details**

summary.prob\_unif 149

			, ,	0 . ( .0 )
summary.prob_unif	Summary method	for the probabilit	v calculator	function (uniform)
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# **Description**

Summary method for the probability calculator function (uniform)

### Usage

```
## S3 method for class 'prob_unif'
summary(object, type = "values", ...)
```

### **Arguments**

object Return value from prob\_unif type Probabilities or values

... further arguments passed to or from other methods

### **Details**

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

summary.regression Summary method for the regression function

# Description

Summary method for the regression function

# Usage

```
## S3 method for class 'regression'
summary(object, sum_check = "", conf_lev = 0.95,
  test_var = "", ...)
```

### **Arguments**

object	Return value from regression
sum_check	Optional output. "rsme" to show the root mean squared error and the standard deviation of the residuals. "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**

150 summary.repeater

#### 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

```
## S3 method for class 'repeater'
summary(object, sum_vars = "", byvar = "",
fun = "sum_rm", form = "", name = "", dec = 4, ...)
```

# Arguments

object Return value from repeater (Numerical) variables to summaries sum\_vars byvar Variable(s) to group data by before summarizing fun Functions to use for summarizing form A string with the formula to evaluate (e.g., "profit = demand \* (price - cost)") To save the simulated data for further analysis specify a name in the Sim name 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. dec Number of decimals to show

further arguments passed to or from other methods

summary.sample\_size 151

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.sample_size_comp
```

Summary method for the sample\_size\_comp function

### Description

Summary method for the sample\_size\_comp function

# Usage

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

### **Arguments**

object Return value from sample\_size\_comp

... further arguments passed to or from other methods

152 summary.sampling

### **Details**

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

### See Also

sample\_size\_comp to generate the results

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

### **Details**

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

### See Also

sampling to generate the results

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

summary.simulater 153

summary.simulater

Summary method for the simulater function

### **Description**

Summary method for the simulater function

### Usage

```
## S3 method for class 'simulater'
summary(object, dec = 4, ...)
```

### **Arguments**

object Return value from simulater dec Number of decimals to show

... 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
```

### **Examples**

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

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

154 summary.single\_prop

### **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

### **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
```

```
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 155

sum\_rm

 $Sum\ with\ na.rm = TRUE$ 

# Description

Sum with na.rm = TRUE

# Usage

 $sum_rm(x)$ 

# **Arguments**

Χ

Input variable

### Value

Sum of input values

# **Examples**

sum\_rm(1:200)

superheroes

Super heroes

# Description

Super heroes

# Usage

data(superheroes)

### **Format**

A data frame with 7 rows and 4 variables

### **Details**

List of super heroes from <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")

156 test\_specs

table2data

Create data.frame from a table

### **Description**

Create data.frame from a table

### Usage

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

### **Arguments**

dat Data.frame

freq Column name with frequency information

# **Examples**

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

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)
```

# Arguments

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

int 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

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

the\_table 157

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, evar)
```

### **Arguments**

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

dat Conjoint data

evar Explanatory variables used in the conjoint regression

### **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", rvar = "Rating", evar = "Memory:Shape")
the_table(result$model, result$dat, result$evar)</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")

158 update\_radiant

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

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")

update\_radiant

Update Radiant

# Description

Update Radiant

# Usage

```
update_radiant()
```

varp\_rm 159

varp\_rm

 $Variance\ for\ the\ population\ na.rm = TRUE$ 

# Description

Variance for the population na.rm = TRUE

### Usage

```
varp_rm(x)
```

### **Arguments**

Х

Input variable

### Value

Variance for the population

### **Examples**

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

var\_check

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

# Description

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

### Usage

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

# Arguments

ev List of explanatory variables provided to \_regression\_ or \_glm\_

cn Column names for all explanatory 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 explanatory variables, and into are interaction terms

viewdata viewdata

### **Examples**

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

var\_rm

 $Variance\ with\ na.rm = TRUE$ 

# Description

Variance with na.rm = TRUE

# Usage

```
var_rm(x)
```

# **Arguments**

X

Input variable

### Value

Variance

# **Examples**

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

viewdata

View data

### **Description**

View data

# Usage

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

# **Arguments**

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

visualize 161

### **Details**

View, search, sort, etc. your data

### **Examples**

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

visualize

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

# Description

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

# Usage

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

### **Arguments**

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

162 weighted.sd

Add a regression line ("line"), a loess line ("loess"), or jitter ("jitter") to a scatter check plot Flip the axes in a plot ("flip") or apply a log transformation (base e) to the y-axis axes ("log\_y") or the x-axis ("log\_x") alpha Opacity for plot elements (0 to 1) Expression used to filter the dataset. This should be a string (e.g., "price > data\_filter 10000") Logical (TRUE, FALSE) to indicate if the function call originate inside a shiny shiny custom Logical (TRUE, FALSE) to indicate if ggplot object (or list of ggplot objects) should be returned. This opion can be used to customize plots (e.g., add a title,

change x and y labels, etc.). See examples and http://docs.ggplot2.org/

for options.

### **Details**

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

weighted.sd

Weighted standard deviation

#### **Description**

Weighted standard deviation

### Usage

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

# Arguments

x Numeric vector
wt Numeric vector of weights

na.rm Remove missing values (default is TRUE)

which.pmax 163

### **Details**

Calculated a weighted standard deviation

which.pmax

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

# Description

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

### Usage

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

# Arguments

... Numeric or character vectors of the same length

### Value

Vector of rankings

# **Examples**

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

which.pmin

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

# Description

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

# Usage

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

# Arguments

... Numeric or character vectors of the same length

### Value

Vector of rankings

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

164 xtile

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

### **Examples**

```
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>
```

xtile

Create a quintile (or decile) index

# Description

Create a quintile (or decile) index

### Usage

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

# **Arguments**

x Numeric variablen number of bins to createrev Reverse the order of the xtiles

xtile 165

# **Details**

Same as stata

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

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