# Package 'radiant'

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```
Title Business Analytics using R and Shiny
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      based interface for business analytics in R, based on the Shiny package.
Depends R (>= 3.1.0),
      lubridate (>= 1.3.3),
      ggplot2 (>= 1.0.0),
      dplyr (>= 0.4.1),
      magrittr (>= 1.5)
Imports car (>= 2.0.22),
      MASS (>= 7.3),
      gridExtra (>= 0.9.1),
      AlgDesign (>= 1.1.7.3),
      GPArotation (>= 2014.11.1),
      psych (>= 1.4.8.11),
      wordcloud (>= 2.5),
      markdown (>= 0.7.4),
      knitr (>= 1.8),
      ggdendro (>= 0.1.15),
      broom (>= 0.3.6),
      tidyr (>= 0.2.0),
      pryr (>= 0.1),
      htmlwidgets (>= 0.3.2),
      rpivotTable (>= 0.1.2.6),
      shiny (>= 0.11.1),
      shinyAce (>= 0.2.1)
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      testthat (>= 0.9.1)
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LazyData true
```

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# Description

Function to calculate the PW and IW table for conjoint

# Usage

```
ca_the_table(model, dat, ca_indep_var)
```

4 changedata

#### **Arguments**

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

dat Conjoint data

ca\_indep\_var Independent 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", ca_dep_var = "Rating", ca_indep_var = "Memory:Shape")
ca_the_table(result$model, result$dat, result$ca_indep_var)</pre>
```

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

```
## Not run:
r_data <- list()
r_data$dat <- data.frame(a = 1:20)
changedata("dat",20:1, "b")
head(r_data$dat)
## End(Not run)</pre>
```

city 5

	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")

compare_means	Compare means for two or more variables	

# Description

Compare means for two or more variables

# Usage

```
compare_means(dataset, cm_var1, cm_var2, data_filter = "",
  cm_paired = "independent", cm_alternative = "two.sided",
  cm_sig_level = 0.95, cm_adjust = "none")
```

# Arguments

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant
cm_var1	A numeric variable or factor selected for comparison
cm_var2	One or more numeric variables for comparison. If cm_var1 is a factor only one variable can be selected and the mean of this variable is compared across (factor) levels of cm_var1
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")
cm_paired	Are samples indepent ("independent") or not ("paired")
cm_alternative	The alternative hypothesis ("two.sided", "greater" or "less")
cm_sig_level	Span of the confidence interval
cm_adjust	Adjustment for multiple comparisons ("none" or "bonf" for Bonferroni)

6 compare\_props

#### **Details**

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

#### Value

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

#### See Also

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

### **Examples**

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

compare\_props

Compare proportions across groups

# **Description**

Compare proportions across groups

### Usage

```
compare_props(dataset, cp_var1, cp_var2, data_filter = "", cp_levels = "",
    cp_alternative = "two.sided", cp_sig_level = 0.95, cp_adjust = "none")
```

# Arguments

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant
cp_var1	A grouping variable to split the data for comparisons
cp_var2	The variable to calculate proportions for
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")
cp_levels	The factor level selected for the proportion comparison
cp_alternative	The alternative hypothesis ("two.sided", "greater" or "less")
cp_sig_level	Span of the confidence interval
cp_adjust	Adjustment for multiple comparisons ("none" or "bonf" for Bonferroni)

#### **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

computer 7

#### See Also

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

# **Examples**

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

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")

conjoint

Conjoint analysis

# Description

Conjoint analysis

# Usage

```
conjoint(dataset, ca_dep_var, ca_indep_var, data_filter = "",
    ca_rev = 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
ca_dep_var	The dependent variable (e.g., profile ratings)
ca_indep_var	Independent variables in the regression
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")
ca_rev	Reverse the values of the dependent variable ('ca_dep_var')

8 conjoint\_profiles

#### **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
```

### **Examples**

```
result <- conjoint(dataset = "mp3", ca_dep_var = "Rating", ca_indep_var = "Memory:Shape")</pre>
```

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
```

```
ca_prof <- readLines(system.file("examples/profiles-movie.txt", package='radiant'))
result <- conjoint_profiles("ca_prof")</pre>
```

correlation 9

correlation Calculate correlations for two or more variables
--

# Description

Calculate correlations for two or more variables

# Usage

```
correlation(dataset, cor_var, data_filter = "", cor_type = "pearson")
```

# Arguments

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant
cor_var	Variables to include in the analysis
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")
cor_type	Type of correlations to calculate. Options are "pearson", "spearman", and "kendall". "pearson" is the default

# **Details**

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

# Value

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

# See Also

```
summary.correlation to summarize results
plot.correlation to plot results
```

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

10 diamonds

cross	tabs

Evaluate associations between categorical variables

# Description

Evaluate associations between categorical variables

# Usage

```
cross_tabs(dataset, ct_var1, ct_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
ct_var1	A categorical variable
ct_var2	Another categorical 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/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
```

# **Examples**

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

diamonds

Diamond prices

# Description

Diamond prices

# Usage

```
data(diamonds)
```

ff\_design 11

#### **Format**

A data frame with 3000 rows and 10 variables

#### **Details**

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

 $ff\_design$ 

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
```

full\_factor

Factor analysis (PCA)

#### **Description**

Factor analysis (PCA)

# Usage

```
full_factor(dataset, ff_var, data_filter = "", ff_meth = "PCA",
    ff_number = 2, ff_rotation = "varimax")
```

12 getdata

# **Arguments**

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant
ff_var	Variables to include in the analysis
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")
ff_meth	Factor extraction method to use
ff_number	Number of factors to extract
ff_rotation	Apply varimax rotation or no rotation ("varimax" or "none")

#### **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
```

# **Examples**

```
result <- full_factor("diamonds",c("price","carat","table","x","y"))
result <- full_factor("diamonds",c("price","carat","table","x","y"), ff_meth = "maxlik")
summary(result)</pre>
```

getdata

Get data for analysis functions

# Description

Get data for analysis functions

### Usage

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

### **Arguments**

dataset	Name of the dataframe
vars	Variables to extract from the dataframe
na.rm	Remove rows with missing values (default is TRUE)
filt	Filter to apply to the specified dataset. For example "price > 10000" if dataset is "diamonds" (default is "")
slice	Select a slice of the specified dataset. For example "1:10" for the first 10 rows or "n()-10:n()" for the last 10 rows (default is ""). Not in Radiant GUI

glm\_reg

#### Value

Data.frame with specified columns and rows

# **Examples**

```
r_data <- list()
r_data$dat <- mtcars
getdata("dat","mpg:vs", filt = "mpg > 20", slice = "1:5")
```

glm\_reg

Generalized linear models (GLM)

# Description

Generalized linear models (GLM)

### Usage

```
glm_reg(dataset, glm_dep_var, glm_indep_var, data_filter = "",
   glm_levels = "", glm_link = "logit", glm_int_var = "", glm_check = "")
```

# **Arguments**

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant
glm_dep_var	The dependent variable in the logit (probit) model
glm_indep_var	Independent variables in the model
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")
glm_levels	The level in the dependent variable defined as _success_
glm_link	Link function for _glm_ ('logit' or 'probit'). 'logit' is the default
glm_int_var	Interaction term to include in the model (not implement)
glm_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

### **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

14 hier\_clus

#### 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"), glm_levels = "Yes")</pre>
```

hier\_clus

Hierarchical cluster analysis

#### **Description**

Hierarchical cluster analysis

#### Usage

```
hier_clus(dataset, hc_vars, data_filter = "", hc_dist = "sq.euclidian",
hc_meth = "ward.D")
```

# **Arguments**

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

hc\_vars Vector of variables to include in the analysis

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

hc\_dist Distance hc\_meth Method

### **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", hc_vars = c("v1:v6"))</pre>
```

kmeans\_clus 15

kmeans_clus	K-means cluster analysis	

### Description

K-means cluster analysis

### Usage

```
kmeans_clus(dataset, km_vars, data_filter = "", km_hc_init = TRUE,
  km_dist = "sq.euclidian", km_meth = "ward.D", km_seed = 1234,
  km_nr_clus = 2)
```

# Arguments

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant
km_vars	Vector of variables to include in the analysis
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")
km_hc_init	Use centers from hier_clus as the starting point
km_dist	Distance for hier_clus
km_meth	Method for hier_clus
km_seed	Random see to use for kmeans if km_hc_init is FALSE
km_nr_clus	Number of clusters to extract

### **Details**

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

#### Value

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

### See Also

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

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

16 mac\_launcher

kurtosi

Exporting the kurtosi function from the psych package

### **Description**

Exporting the kurtosi function from the psych package

mac\_launcher

Create a launcher for Mac (.command)

# Description

Create a launcher for Mac (.command)

# Usage

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

#### **Arguments**

app

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

### **Details**

On Mac a file named 'radiant.command' will be put on the desktop. Double-click the file to launch the specified Radiant app

```
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>
```

mds 17

mds (Dis)similarity based brand maps (MDS)

# Description

(Dis)similarity based brand maps (MDS)

### Usage

```
mds(dataset, mds_id1, mds_id2, mds_dis, data_filter = "",
    mds_method = "metric", mds_dim_number = 2)
```

# Arguments

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an $r\_data$ list from Radiant
mds_id1	A character variable or factor with unique entries
mds_id2	A character variable or factor with unique entries
mds_dis	A numeric measure of brand dissimilarity
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")
mds_method	Apply metric or non-metric MDS
mds_dim_number	Number of dimensions

# **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")
result <- mds("diamonds","clarity","cut","price")
summary(result)</pre>
```

18 mergedata

me	rge	≥da	ata

Merge datasets using dplyr's join functions

### **Description**

Merge datasets using dplyr's join functions

### Usage

```
mergedata(dataset, dataset2, merge_vars = "", merge_type = "inner_join",
    merge_name = paste0("merged_", dataset))
```

#### **Arguments**

dataset	Dotocot nome (atmine)	This can be a dataframe in the global environment or ar
uataset	Dataset name (string).	. This can be a dalaframe in the global environment of al

element in an r\_data list from Radiant

dataset2 Dataset name (string) to merge with 'dataset'. This can be a dataframe in the

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

merge\_vars Variables used to merge/join 'dataset' and 'dataset2'

merge\_type The main 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. '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

merge\_name Name for the merged dataset

### **Details**

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

#### Value

If (reactive) list 'r\_data' exists the merged dataset added as 'merge\_name'. Else the merged dataset will be returned as 'merge\_name'

```
mergedata("titanic","titanic_pred",c("pclass","sex","age")) %>% head
```

mp3

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")

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")

20 plot.compare\_props

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, cm_plots = "bar", ...)
```

### **Arguments**

x Return value from compare\_means
 cm\_plots One or more plots ("bar", "box", or "density")
 ... 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, cm_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, cp_plots = "props", ...)
```

# **Arguments**

```
    x Return value from compare_props
    cp_plots One or more plots of proportions or counts ("props" or "counts")
    ... further arguments passed to or from other methods
```

plot.conjoint 21

#### **Details**

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

#### See Also

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

#### **Examples**

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

plot.conjoint

Plot method for the conjoint function

# **Description**

Plot method for the conjoint function

# Usage

```
## S3 method for class 'conjoint'
plot(x, ca_plots = "pw", ca_scale_plot = FALSE, ...)
```

### **Arguments**

```
    x Return value from conjoint
    ca_plots Show either the part-worth ("pw") or importance-weights ("iw") plot
    ca_scale_plot Scale the axes of the part-worth plots to the same range
    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", ca_dep_var = "Rating", ca_indep_var = "Memory:Shape")
plot(result, ca_scale_plot = TRUE)
plot(result, ca_plots = "iw")</pre>
```

22 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)</pre>
```

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, ct_check = "", ...)
```

plot.full\_factor 23

### Arguments

x Return value from cross\_tabs

ct\_check Show plots for variables ct\_var1 and ct\_var2. "observed" for the observed fre-

quencies 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
summary.cross_tabs to summarize results
```

### **Examples**

```
result <- cross_tabs("newspaper", "Income", "Newspaper")
plot(result, ct_check = c("observed", "expected", "chi_sq"))</pre>
```

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, ...)
```

#### **Arguments**

x Return value from full\_factor

... further arguments passed to or from other methods

#### **Details**

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

## See Also

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

24 plot.glm\_predict

### **Examples**

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

plot.glm\_predict

Plot method for the predict.glm\_reg function

### **Description**

Plot method for the predict.glm\_reg function

# Usage

```
## S3 method for class 'glm_predict'
plot(x, glm_xvar = "", glm_facet_row = ".",
   glm_facet_col = ".", glm_color = "none", glm_conf_level = 0.95, ...)
```

### **Arguments**

x	Return value from predict.glm_reg.
glm_xvar	Variable to display along the X-axis of the plot
glm_facet_row	Create vertically arranged subplots for each level of the selected factor variable
glm_facet_col	Create horizontally arranged subplots for each level of the selected factor variable
glm_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
<pre>glm_conf_level</pre>	Confidence level to use for prediction intervals (.95 is the default). Note that the error bars for predictions are approximations at this point.
	further arguments passed to or from other methods

### **Details**

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

### 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
```

plot.glm\_reg 25

#### **Examples**

```
result <- glm_reg("titanic", "survived", c("pclass", "sex", "age"), glm_levels = "Yes")</pre>
pred <- predict(result, glm_predict_cmd = "pclass = levels(pclass)")</pre>
plot(pred, glm_xvar = "pclass")
pred <- predict(result, glm_predict_cmd = "age = 0:100")</pre>
plot(pred, glm_xvar = "age")
pred <- predict(result, glm_predict_cmd = "pclass = levels(pclass), sex = levels(sex)")</pre>
plot(pred, glm_xvar = "pclass", glm_color = "sex")
pred <- predict(result, glm_predict_cmd = "pclass = levels(pclass), age = seq(0,100,20)")</pre>
plot(pred, glm_xvar = "pclass", glm_color = "age")
plot(pred, glm_xvar = "age", glm_color = "pclass")
pred <- predict(result, glm_predict_cmd="pclass=levels(pclass), sex=levels(sex), age=seq(0,100,20)")</pre>
plot(pred, glm_xvar = "age", glm_color = "sex", glm_facet_col = "pclass")
plot(pred, glm_xvar = "age", glm_color = "pclass", glm_facet_col = "sex")
pred <- predict(result, glm_predict_cmd="pclass=levels(pclass), sex=levels(sex), age=seq(0,100,5)")</pre>
plot(pred, glm_xvar = "age", glm_color = "sex", glm_facet_col = "pclass")
plot(pred, glm_xvar = "age", glm_color = "pclass", glm_facet_col = "sex")
```

plot.glm\_reg

Plot method for the glm\_reg function

#### **Description**

Plot method for the glm\_reg function

#### Usage

```
## S3 method for class 'glm_reg'
plot(x, glm_plots = "", glm_conf_level = 0.95,
   glm_coef_int = FALSE, ...)
```

# Arguments

Return value from glm\_reg

glm\_plots

Plots to produce for the specified GLM model. Use "" to avoid showing any plots (default). "hist" shows histograms of all variables in the model. "scatter" shows scatter plots (or box plots for factors) for the dependent variable with each independent variable. "dashboard" is a series of four plots used to visually evaluate model. "coef" provides a coefficient plot

glm\_conf\_level

Confidence level to use for coefficient and odds confidence intervals (.95 is the default)

glm\_coef\_int

Include the intercept in the coefficient plot (TRUE or FALSE). FALSE is the default

further arguments passed to or from other methods

#### **Details**

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

26 plot.hier\_clus

#### See Also

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

### **Examples**

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

plot.hier\_clus

Plot method for the hier\_clus function

# Description

Plot method for the hier\_clus function

# Usage

```
## S3 method for class 'hier_clus'
plot(x, hc_plots = c("scree", "diff"), hc_cutoff = 0.02,
...)
```

# **Arguments**

X	Return value from hier_clus
hc_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
hc_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
	further arguments passed to or from other methods

#### **Details**

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

# See Also

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

```
result <- hier_clus("shopping", hc_vars = c("v1:v6"))
plot(result, hc_plots = c("diff", "scree"), hc_cutoff = .05)
plot(result, hc_plots = "dendro", hc_cutoff = 0)</pre>
```

plot.kmeans\_clus 27

plot.kmeans\_clus

Plot method for kmeans\_clus

# **Description**

Plot method for kmeans\_clus

### Usage

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

# **Arguments**

x Return value from kmeans\_clus

... further arguments passed to or from other methods

#### **Details**

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

### See Also

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

# **Examples**

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

plot.mds

Plot method for the mds function

### **Description**

Plot method for the mds function

# Usage

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

28 plot.pmap

### **Arguments**

```
    x Return value from mds
    mds_rev_dim Flip the axes in plots
    mds_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, mds_rev_dim = 1:2)
plot(result, mds_rev_dim = 1:2, mds_fontsz = 2)</pre>
```

plot.pmap

Plot method for the pmap function

# Description

Plot method for the pmap function

# Usage

```
## $3 method for class 'pmap'
plot(x, pmap_plot = "", pmap_scaling = 2.1,
    pmap_fontsz = 1.3, ...)
```

### **Arguments**

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

#### **Details**

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

plot.pre\_factor 29

#### See Also

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

### **Examples**

plot.pre\_factor

Plot method for the pre\_factor function

# **Description**

Plot method for the pre\_factor function

### Usage

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

### **Arguments**

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

# **Details**

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

# See Also

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

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

30 plot.regression

plot.regression

Plot method for the regression function

#### **Description**

Plot method for the regression function

#### Usage

```
## S3 method for class 'regression'
plot(x, reg_plots = "", reg_lines = "",
  reg_conf_level = 0.95, reg_coef_int = FALSE, ...)
```

# **Arguments**

Return value from regression

reg\_plots

Regression plots to produce for the specified regression model. Enter "" to avoid showing any plots (default). "hist" to show histograms of all variables in the model. "correlations" for a visual representation of the correlation matrix selected variables. "scatter" to show scatter plots (or box plots for factors) for the dependent variables with each independent variable. "dashboard" for a series of six plots that can be used to evaluate model fit visually. "resid\_pred" to plot the independent variables against the model residuals. "coef" for a coefficient plot with adjustable confidence intervals. "leverage" to show leverage plots for each independent variable

reg\_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")

reg\_conf\_level Confidence level used to estimate confidence intervals (.95 is the default)

reg\_coef\_int

Include the intercept in the coefficient plot (TRUE, FALSE). FALSE is the de-

fault

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
```

```
result <- regression("diamonds", "price", c("carat","clarity"))</pre>
plot(result, reg_plots = "dashboard")
plot(result, reg_plots = "dashboard", reg_lines = c("line", "loess"))
plot(result, reg_plots = "coef", reg_coef_int = TRUE)
plot(result, reg_plots = "coef", reg_conf_level = .99, reg_coef_int = TRUE)
```

plot.reg\_predict 31

```
plot(result, reg_plots = "hist")
plot(result, reg_plots = "scatter", reg_lines = c("line","loess"))
plot(result, reg_plots = "correlations")
plot(result, reg_plots = "leverage")
plot(result, reg_plots = "resid_pred", reg_lines = "line")
```

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, reg_xvar = "", reg_facet_row = ".",
    reg_facet_col = ".", reg_color = "none", reg_conf_level = 0.95, ...)
```

#### **Arguments**

Χ	Return value from predict.regression.
reg_xvar	Variable to display along the X-axis of the plot
reg_facet_row	Create vertically arranged subplots for each level of the selected factor variable
reg_facet_col	Create horizontally arranged subplots for each level of the selected factor variable
reg_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
reg_conf_level	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
```

```
result <- regression("diamonds", "price", c("carat","clarity"))
pred <- predict(result, reg_predict_cmd = "carat = 1:10")
plot(pred, reg_xvar = "carat")
result <- regression("diamonds", "price", c("carat","clarity"), reg_int_var = "carat:clarity")
dpred <- getdata("diamonds") %>% slice(1:100)
pred <- predict(result, reg_predict_data = "dpred")
plot(pred, reg_xvar = "carat", reg_color = "clarity")</pre>
```

32 plot.single\_prop

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, sm_plots = "hist", ...)
```

# **Arguments**

x Return value from single\_mean

sm\_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 (sm\_comp\_value). Simulation is used to demonstrate the sampling variability in the data under the

null-hypothesis

... further arguments passed to or from other methods

#### **Details**

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

#### See Also

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

### **Examples**

```
result <- single_mean("diamonds","price", sm_comp_value = 3500)
plot(result, sm_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, sp_plots = "hist", ...)
```

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#### **Arguments**

x Return value from single\_prop

sp\_plots Plots to generate. "hist" shows a histogram of the data along with vertical

lines that indicate the sample proportion and the confidence interval. "simulate" shows the location of the sample proportion and the comparison value (sp\_comp\_value). Simulation is used to demonstrate the sampling variability

in the data under the null-hypothesis

... further arguments passed to or from other methods

#### **Details**

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

#### See Also

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

# **Examples**

```
result <- single_prop("diamonds","clarity", sp_levels = "IF", sp_comp_value = 0.05)
plot(result, sp_plots = c("hist", "simulate"))</pre>
```

pmap

Attribute based brand maps

### **Description**

Attribute based brand maps

# Usage

```
pmap(dataset, pmap_brand, pmap_attr, data_filter = "", pmap_pref = "",
    pmap_dim_number = 2)
```

#### **Arguments**

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

element in an r\_data list from Radiant

pmap\_brand A character variable with brand names

pmap\_attr Names of numeric variables

data\_filter Expression entered in, e.g., Data > View to filter the dataset in Radiant. The

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

pmap\_pref Names of numeric brand preference measures

pmap\_dim\_number

Number of dimensions

#### **Details**

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

34 predict.glm\_reg

#### Value

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

#### See Also

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

### **Examples**

```
result <- pmap("computer", "Brand", "HighEnd:Business")</pre>
```

predict.glm\_reg

Predict method for the glm\_reg function

# **Description**

Predict method for the glm\_reg function

# Usage

```
## S3 method for class 'glm_reg'
predict(object, glm_predict_cmd = "",
    glm_predict_data = "", ...)
```

# **Arguments**

```
object Return value from glm_reg
glm_predict_cmd
Generate predictions using
```

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)')

glm\_predict\_data

Provide the name of a dataframe to generate predictions (e.g., "titanic"). The dataset must contain all columns used in the estimation

.. 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
```

predict.regression 35

#### **Examples**

```
result <- glm_reg("titanic", "survived", c("pclass", "sex"), glm_levels = "Yes")
predict(result, glm_predict_cmd = "pclass = levels(pclass)")
predict(result, glm_predict_cmd = "sex = c('male', 'female')")</pre>
```

predict.regression

Predict method for the regression function

### **Description**

Predict method for the regression function

#### Usage

```
## S3 method for class 'regression'
predict(object, reg_predict_cmd = "",
    reg_predict_data = "", reg_conf_level = 0.95, reg_save_pred = FALSE,
    ...)
```

#### **Arguments**

```
object Return value from regression

reg_predict_cmd

Command used to generate data for prediction

reg_predict_data

Name of the dataset to use for prediction

reg_conf_level Confidence level used to estimate confidence intervals (.95 is the default)

reg_save_pred Save predicted values to a csv file

... 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
```

```
result <- regression("diamonds", "price", c("carat","clarity"))
predict(result, reg_predict_cmd = "carat = 1:10")
predict(result, reg_predict_cmd = "clarity = levels(clarity)")
result <- regression("diamonds", "price", c("carat","clarity"), reg_int_var = c("carat:clarity"))
dpred <- getdata("diamonds") %>% slice(1:10)
predict(result, reg_predict_data = "dpred")
```

36 radiant

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, pf_var, 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

pf\_var Variables to include in the analysis

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

### **Details**

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

### Value

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

# See Also

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

# **Examples**

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

radiant

radiant

# **Description**

radiant

Launch Radiant in the default browser

# Usage

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

regression 37

# **Arguments**

app Choose the app to run. Either "base", "quant", or "marketing". "marketing" is

the default

### **Details**

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

# **Examples**

```
if (interactive()) {
  radiant()
}
```

regression

Linear regression using OLS

# **Description**

Linear regression using OLS

# Usage

```
regression(dataset, reg_dep_var, reg_indep_var, data_filter = "",
  reg_int_var = "", reg_check = "")
```

# **Arguments**

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

# **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
```

38 sample\_size

### **Examples**

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

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 **listofrandomnames.com**. Description provided in attr(rndnames, "description")

sample\_size

Sample size calculation

# Description

Sample size calculation

# Usage

```
sample_size(ss_type = "mean", ss_mean_err = 2, ss_mean_s = 10,
    ss_prop_err = 0.1, ss_prop_p = 0.5, ss_z = 1.96, ss_incidence = 1,
    ss_response = 1, ss_pop_correction = "no", ss_pop_size = 1000000)
```

# **Arguments**

	ss_type	Choose "mean" or "proportion"
	ss_mean_err	Acceptable Error for Mean
	ss_mean_s	Standard deviation for Mean
	ss_prop_err	Acceptable Error for Proportion
	ss_prop_p	Initial proportion estimate for Proportion
	SS_Z	Z-value
	ss_incidence	Incidence rate (i.e., fraction of valid respondents)
	ss_response	Response rate
ss_pop_correction		
		Apply correction for population size ("yes", "no")
	ss_pop_size	Population size

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#### **Details**

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

### Value

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

### See Also

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

### **Examples**

```
result <- sample_size(ss_type = "mean", ss_mean_err = 2, ss_mean_s = 10)</pre>
```

sampling

Simple random sampling

### **Description**

Simple random sampling

#### Usage

```
sampling(dataset, smp_var, smp_sample_size, data_filter = "",
    smp_print_full = TRUE)
```

# **Arguments**

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

element in an r\_data list from Radiant

smp\_var The variable to sample from

 ${\tt smp\_sample\_size}$ 

Number of units to select

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

smp\_print\_full Print full sampling frame. Default is TRUE

# **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
```

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

40 save\_glm\_resid

save\_factors

Save factor scores to active dataset

# Description

Save factor scores to active dataset

# Usage

```
save_factors(object)
```

# Arguments

object

Return value from full\_factor

# **Details**

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

# **Examples**

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

save\_glm\_resid

Save residuals generated in the glm\_reg function

# **Description**

Save residuals generated in the glm\_reg function

# Usage

```
save_glm_resid(object)
```

# Arguments

object

Return value from glm\_reg

### **Details**

See  $\verb|http://vnijs.github.io/radiant/quant/glm_reg.html| for an example in Radiant| \\$ 

save\_membership 41

# **Examples**

```
## Not run:
result <- glm_reg("titanic", "survived", "pclass", glm_levels = "Yes")
save_glm_resid(result)
## End(Not run)</pre>
```

save\_membership

Add a cluster membership variable to the active dataset

# **Description**

Add a cluster membership variable to the active dataset

# Usage

```
save_membership(object)
```

# **Arguments**

object

Return value from kmeans\_clus

# **Details**

### See Also

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

```
## Not run:
result <- kmeans_clus("shopping", km_vars = c("v1:v6"))
save_membership(result)
## End(Not run)</pre>
```

set\_class

save\_reg\_resid

Save regression residuals

# Description

Save regression residuals

# Usage

```
save_reg_resid(object)
```

# **Arguments**

object

Return value from regression

### **Details**

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

# **Examples**

```
## Not run:
result <- regression("diamonds", "price", c("carat","clarity"))
save_reg_resid(result)
## End(Not run)</pre>
```

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()
```

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

shopping 43

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")

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))
```

44 single\_mean

	-	
sin	gle_	_mean

Compare a sample mean to a population mean

# Description

Compare a sample mean to a population mean

# Usage

```
single_mean(dataset, sm_var, data_filter = "", sm_comp_value = 0,
    sm_alternative = "two.sided", sm_sig_level = 0.95)
```

# **Arguments**

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an $r_{data}$ list from Radiant
sm_var	The variable selected for the mean comparison
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")
sm_comp_value	Population value to compare to the sample mean
sm_alternative	The alternative hypothesis ("two.sided", "greater", or "less")
sm_sig_level	Span for the confidence interval

# **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")
```

single\_prop 45

si	ingle_prop	Compare a sample proportion to a population proportion

# Description

Compare a sample proportion to a population proportion

# Usage

```
single_prop(dataset, sp_var, data_filter = "", sp_levels = "",
    sp_comp_value = 0.5, sp_alternative = "two.sided", sp_sig_level = 0.95)
```

# **Arguments**

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant
sp_var	The variable selected for the proportion comparison
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")
sp_levels	The factor level selected for the proportion comparison
sp_comp_value	Population value to compare to the sample proportion
sp_alternative	The alternative hypothesis ("two.sided", "greater", or "less")
sp_sig_level	Span of the confidence interval

# **Details**

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

# Value

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

### See Also

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

# **Examples**

```
result <- single_prop("diamonds","clarity", sp_levels = "IF", sp_comp_value = 0.05)</pre>
```

skew

Exporting the skew function from the psych package

# Description

Exporting the skew function from the psych package

46 sshhr

sshh

Hide warnings and messages and return invisible

# Description

Hide warnings and messages and return invisible

# Usage

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

# Arguments

.. Inputs to keep quite

# **Details**

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

# **Examples**

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

sshhr

Hide warnings and messages and return result

# Description

Hide warnings and messages and return result

# Usage

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

# **Arguments**

... Inputs to keep quite

# **Details**

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

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

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

# **Description**

Summary method for the compare\_means function

# Usage

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

# **Arguments**

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

### **Details**

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

### See Also

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

# **Examples**

```
result <- compare_means("diamonds","cut","price")
summary(result)</pre>
```

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

# **Description**

Summary method for the compare\_props function

# Usage

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

# Arguments

object Return value from compare\_props

... further arguments passed to or from other methods

48 summary.conjoint

### **Details**

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

### See Also

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

# **Examples**

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

summary.conjoint

Summary method for the conjoint function

# **Description**

Summary method for the conjoint function

# Usage

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

# **Arguments**

object Return value from conjoint
ca\_vif 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
```

```
result <- conjoint(dataset = "mp3", ca_dep_var = "Rating", ca_indep_var = "Memory:Shape")
summary(result, ca_vif = TRUE)</pre>
```

```
summary.conjoint_profiles
```

Summary method for the conjoint\_profiles function

# **Description**

Summary method for the conjoint\_profiles function

# Usage

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

# **Arguments**

object Return value from conjoint\_profiles

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

#### **Details**

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

### See Also

conjoint\_profiles to calculate results

# **Examples**

```
ca_prof <- readLines(system.file("examples/profiles-movie.txt", package='radiant'))
result <- conjoint_profiles("ca_prof")
summary(result)</pre>
```

summary.correlation

Summary method for the correlation function

# Description

Summary method for the correlation function

# Usage

```
## S3 method for class 'correlation'
summary(object, cor_cutoff = 0, ...)
```

# Arguments

object Return value from correlation

cor\_cutoff Show only corrlations larger than the cutoff in absolute value. Default is a cutoff

of 0

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

50 summary.cross\_tabs

#### **Details**

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

#### See Also

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

### **Examples**

```
result <- correlation("diamonds",c("price","carat","clarity"))
summary(result, cor_cutoff = .3)</pre>
```

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, ct_check = "", ...)
```

# Arguments

object Return value from cross\_tabs

ct\_check Show table(s) for variables ct\_var1 and ct\_var2. "observed" for the observed fre-

quencies 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, ct_check = c("observed","expected","chi_sq"))</pre>
```

summary.full\_factor 51

```
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, ff_cutoff = 0, ff_sort = FALSE, ...)
```

# **Arguments**

```
object Return value from full_factor

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

ff_sort Sort factor loadings

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

#### Details

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

### See Also

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

# **Examples**

```
result <- full_factor("diamonds",c("price","carat","depth","table","x"))
summary(result)
summary(result, ff_cutoff = 0, ff_sort = FALSE)
summary(result, ff_cutoff = 0, ff_sort = TRUE)
summary(result, ff_cutoff = .5, ff_sort = TRUE)</pre>
```

summary.glm\_reg

Summary method for the glm\_reg function

# **Description**

Summary method for the glm\_reg function

### Usage

```
## S3 method for class 'glm_reg'
summary(object, glm_sum_check = "", glm_conf_level = 0.95,
   glm_test_var = "", ...)
```

52 summary.hier\_clus

#### **Arguments**

object Return value from glm\_reg

glm\_sum\_check Optional output or estimation parameters. "rsme" to show the root mean squared error. "sumsquares" to show the sum of squares table. "vif" to show multicollinearity diagnostics. "confint" to show coefficient confidence interval estimates.

glm\_conf\_level Confidence level to use for coefficient and odds confidence intervals (.95 is the default)

glm\_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
```

### **Examples**

```
result <- glm_reg("titanic", "survived", "pclass", glm_levels = "Yes")
summary(result, glm_test_var = "pclass")
res <- glm_reg("titanic", "survived", c("pclass", "sex"), glm_int_var="pclass:sex", glm_levels="Yes")
summary(res, glm_sum_check = c("vif", "confint", "odds"))</pre>
```

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

summary.kmeans\_clus 53

### See Also

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

# **Examples**

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

 ${\tt summary.kmeans\_clus}$ 

 $Summary\ method\ for\ kmeans\_clus$ 

# 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

### **Details**

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

### See Also

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

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

54 summary.pmap

summary.mds

Summary method for the mds function

# **Description**

Summary method for the mds function

# Usage

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

# **Arguments**

object Return value from mds

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

stress measure. Not currently accessible in Radiant

... further arguments passed to or from other methods

### **Details**

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

# See Also

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

# **Examples**

```
result <- mds("city","from","to","distance")
summary(result)
summary(result, mds_round = 2)</pre>
```

summary.pmap

Summary method for the pmap function

# Description

Summary method for the pmap function

# Usage

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

summary.pre\_factor 55

### **Arguments**

object Return value from pmap

pmap\_cutoff Show only loadings with (absolute) values above pmap\_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
```

# **Examples**

```
result <- pmap("computer","Brand","HighEnd:Business")
summary(result)
summary(result, pmap_cutoff = .3)
result <- pmap("computer","Brand","HighEnd:Dated", pmap_pref = c("Innovative","Business"))
summary(result)</pre>
```

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
```

56 summary.regression

#### **Examples**

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

summary.regression

Summary method for the regression function

# **Description**

Summary method for the regression function

#### Usage

```
## S3 method for class 'regression'
summary(object, reg_sum_check = "",
    reg_conf_level = 0.95, reg_test_var = "", ...)
```

### **Arguments**

object Return value from regression

reg\_sum\_check Optional output or estimation parameters. "rsme" to show the root mean squared error. "sumsquares" to show the sum of squares table. "vif" to show multicollinearity diagnostics. "confint" to show coefficient confidence interval estimates.

reg\_conf\_level Confidence level used to estimate confidence intervals (.95 is the default)reg\_test\_var Variables to evaluate in model comparison (i.e., a competing models F-test)

... further arguments passed to or from other methods

### **Details**

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

#### See Also

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

```
result <- regression("diamonds", "price", c("carat","clarity"))
summary(result, reg_sum_check = c("rmse","sumsquares","vif","confint"), reg_test_var = "clarity")
result <- regression("shopping", "v1", c("v2","v3"))
summary(result, reg_test_var = "v2")</pre>
```

summary.sample\_size 57

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(ss_type = "mean", ss_mean_err = 2, ss_mean_s = 10)
summary(result)</pre>
```

summary.sampling

Summary method for the sampling function

# **Description**

Summary method for the sampling function

# Usage

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

# **Arguments**

object Return value from sampling

... further arguments passed to or from other methods

# **Details**

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

58 summary.single\_mean

### See Also

```
sampling to generate the results
```

# **Examples**

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

### **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
```

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

summary.single\_prop 59

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
```

### **Examples**

```
result <- single_prop("diamonds","clarity", sp_levels = "IF", sp_comp_value = 0.05)
summary(result)</pre>
```

test\_check

Add interaction terms to list of test variables if needed

# Description

Add interaction terms to list of test variables if needed

#### Usage

```
test_check(test_var, int_var)
```

### **Arguments**

test\_var List of variables to use for testing for \_regression\_ or \_glm\_

int\_var Interaction terms specified

### **Details**

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

60 titanic\_pred

### Value

'test\_var' is a vector of variables to test

# **Examples**

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

titanic

Survival data for the Titanic

# Description

Survival data for the Titanic

# Usage

```
data(titanic)
```

### **Format**

A data frame with 1309 rows and 11 variables

### **Details**

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

titanic\_pred

Predict survival

# Description

Predict survival

# Usage

```
data(titanic_pred)
```

# **Format**

A data frame with 6 rows and 3 variables

# Details

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

toothpaste 61

toothpaste	Toothpaste attitudes
------------	----------------------

# **Description**

Toothpaste attitudes

# Usage

```
data(toothpaste)
```

# **Format**

A data frame with 60 rows and 10 variables

### **Details**

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

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

# **Description**

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

### Usage

```
var_check(indep_var, cn, int_var = "")
```

### **Arguments**

indep\_var List of independent variables provided to \_regression\_ or \_glm\_

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

int\_var 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, 'indep\_var' is the list of indepdent variables, and int\_var are interaction terms

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

62 visualize

visualize

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

# Description

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

# Usage

```
visualize(dataset, viz_xvar, viz_yvar = "none", data_filter = "",
    viz_type = "hist", viz_facet_row = ".", viz_facet_col = ".",
    viz_color = "none", viz_bins = 10, viz_smooth = 1, viz_check = "",
    viz_axes = "")
```

### **Arguments**

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant
viz_xvar	One or more variables to display along the X-axis of the plot
viz_yvar	Variable to display along the Y-axis of the plot (default = "none")
data_filter	Expression used to filter the dataset. This should be a string (e.g., "price $> 10000$ ")
viz_type	Type of plot to create. One of Histogram ('hist'), Density ('density'), Scatter ('scatter'), Line ('line'), Bar ('bar'), or Box-plot ('box')
viz_facet_row	Create vertically arranged subplots for each level of the selected factor variable
viz_facet_col	Create horizontally arranged subplots for each level of the selected factor variable
viz_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
viz_bins	Number of bins used for a histogram (not accessible in Radiant)
viz_smooth	Adjust the flexibility of the loess line for scatter plots (not accessible in Radiant)
viz_check	Add a regression line ("line"), a loess line ("loess"), or jitter ("jitter") to a scatter plot
viz_axes	Flip the axes in a plot ("flip") or apply a log transformation (base e) to the y-axis ("log_y") or the x-axis ("log_x")

### **Details**

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

### Value

Generated plots

```
visualize("diamonds", "carat", "price", viz_type = "scatter", viz_check = "loess")
visualize("diamonds", "price:x", viz_type = "hist")
visualize("diamonds", "carat:x", viz_yvar = "price", viz_type = "scatter")
```

win\_launcher 63

win\_launcher

Create a launcher for Windows (.bat)

# Description

Create a launcher for Windows (.bat)

### Usage

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

# **Arguments**

арр

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

### **Details**

On Windows a file named 'radiant.bat' will be put on the desktop. Double-click the file to launch the specified Radiant app

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

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