# Package 'radiant'

May 9, 2015

```
Title Business Analytics using R and Shiny
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Description A platform-independent browser-
      based interface for business analytics in R, based on the Shiny package.
Depends R (>= 3.1.0),
      magrittr (>= 1.5),
      ggplot2 (>= 1.0.0),
      tidyr (>= 0.2.0),
      dplyr (>= 0.4.1)
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),
      pryr (>= 0.1),
      yam1 (>= 2.1.13),
      htmlwidgets (>= 0.3.3),
      rpivotTable (>= 0.1.3.4),
      shiny (>= 0.11.1.9004),
      shinyAce (>= 0.2.1),
      lubridate (>= 1.3.3),
      DT (>= 0.0.38)
Suggests rmarkdown (>= 0.4.2),
      ggvis (>= 0.4),
      devtools (>= 1.7.0),
      testthat (>= 0.9.1),
      covr (>= 0.2.0.9002)
URL https://github.com/vnijs/radiant, http://vnijs.github.io/radiant/
BugReports https://github.com/vnijs/radiant/issues
License AGPL-3 | file LICENSE
```

# LazyData true

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ca\_the\_table

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avengers

Index

Avengers

# Description

Avengers

# Usage

data(avengers)

### **Format**

A data frame with 7 rows and 4 variables

# **Details**

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

ca\_the\_table

Function to calculate the PW and IW table for conjoint

# Description

Function to calculate the PW and IW table for conjoint

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

changedata 5

### **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

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

6 clean\_loadings

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")

clean\_loadings

Sort and clean loadings

### **Description**

Sort and clean loadings

### Usage

```
clean_loadings(ff_loadings, ff_cutoff = 0, ff_sort = FALSE, ff_round = 8)
```

### **Arguments**

ff\_loadings Data.frame with loadings

ff\_cutoff Show only loadings with (absolute) values above ff\_cutoff (default = 0)

ff\_sort Sort factor loadings
ff\_round Number of digits to show

### **Details**

```
See \label{lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html:lem:html
```

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

combinedata 7

| combinedata | Combine datasets using dplyr's bind and join functions |  |
|-------------|--|--|
|             |  |  |

#### **Description**

Combine datasets using dplyr's bind and join functions

#### Usage

```
combinedata(dataset, dataset2, cmb_vars = "", cmb_type = "bind_rows",
   cmb_name = "cmb_data")
```

#### Arguments

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

element in an r\_data list from Radiant

dataset2 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

cmb\_vars Variables used to combine 'dataset' and 'dataset2'

cmb\_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.

cmb\_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 'cmb\_name'. Else the combined dataset will be returned as 'cmb\_name'

```
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, cmb_type = "bind_cols")
combinedata("avengers", "superheroes", cmb_type = "bind_cols")
avengers %>% combinedata(superheroes, cmb_type = "bind_rows")
```

8 compare\_means

| compare_me | ans |
|------------|-----|

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)  |

# **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
```

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

compare\_props 9

|--|

### **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

#### See Also

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

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

10 conjoint

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|-------|----|----|---|
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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")

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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')  |

### **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

conjoint\_profiles 11

#### See Also

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

#### **Examples**

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

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
```

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

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

correlation 13

| 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>
```

14 cv

| 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>
```

C۷

Coefficient of variation

# Description

Coefficient of variation

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

diamonds 15

### **Arguments**

x Input variable

na.rm If TRUE missing values are removed before calculation

#### Value

Coefficient of variation

### **Examples**

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

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")

explore

Explore data

# **Description**

Explore data

```
explore(dataset, expl_vars = "", data_filter = "", expl_byvar = "",
    expl_fun = c("length", "mean_rm"))
```

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### **Arguments**

| dataset     | Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant                    |
|-------------|--|
| expl_vars   | (Numerical) variables to summaries   |
| 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") |
| expl_byvar  | Variable(s) to group data by before summarizing  |
| expl_fun    | Functions to use for summarizing   |

#### **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 plot.explore to plot summaries
```

### **Examples**

```
result <- explore("diamonds", "price:x")
summary(result)
result <- explore("diamonds", "price", expl_byvar = "cut", expl_fun = c("length", "skew"))
summary(result)</pre>
```

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

full\_factor 17

#### 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")
```

# 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
```

```
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>
```

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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 = "", 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 |

getsummary 19

#### 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")
rm(r_data, envir = .GlobalEnv)
```

getsummary

Create data.frame summary

# Description

Create data.frame summary

# Usage

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

# Arguments

dat Data.frame

dc Class for each variable

#### **Details**

Used by Explore and Transform

glm\_reg

Generalized linear models (GLM)

# **Description**

Generalized linear models (GLM)

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

20 hier\_clus

### **Arguments**

| dataset       | Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant  |
|---------------|--|
| 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

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

hier\_clus

Hierarchical cluster analysis

# Description

Hierarchical cluster analysis

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

is\_empty 21

### **Arguments**

dataset 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
```

#### **Examples**

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

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

22 kmeans\_clus

### **Examples**

```
is_empty("")
is_empty(NULL)
```

is\_string

Is input a string?

# Description

Is input a string?

# Usage

```
is_string(x)
```

# **Arguments**

Х

Input

### **Details**

Is input a string

# Value

TRUE if string, else FALSE

# **Examples**

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

kmeans\_clus

K-means cluster analysis

# Description

K-means cluster analysis

```
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)
```

kurtosi 23

### **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
```

# **Examples**

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

kurtosi Exporting the kurtosi function from the psych package

# Description

Exporting the kurtosi function from the psych package

24 lin\_launcher

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

#### See Also

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

lin\_launcher

Create a launcher for Linux (.sh)

# Description

Create a launcher for Linux (.sh)

# Usage

```
lin_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 Linux a file named 'radiant.sh' will be put on the desktop. Double-click the file to launch the specified Radiant app

mac\_launcher 25

#### **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>
```

mac\_launcher

Create a launcher for Mac (.command)

# Description

Create a launcher for Mac (.command)

### Usage

```
mac_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 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>
```

26 mds

 ${\tt max\_rm}$ 

 $Max \ with \ na.rm = TRUE$ 

# Description

Max with na.rm = TRUE

### Usage

```
max_rm(x)
```

### **Arguments**

х

Input variable

# Value

Maximum value

# **Examples**

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

 $\mathsf{mds}$ 

(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") |
| ${\sf mds\_method}$      | Apply metric or non-metric MDS   |
| ${\tt mds\_dim\_number}$ | Number of dimensions   |

mean\_rm 27

#### **Details**

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

#### Value

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

### See Also

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

# **Examples**

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

mean\_rm

 $Mean\ with\ na.rm = TRUE$ 

# Description

Mean with na.rm = TRUE

# Usage

```
mean_rm(x)
```

# **Arguments**

Χ

Input variable

#### Value

Mean value

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

28 min\_rm

median\_rm

 $Median\ with\ na.rm = TRUE$ 

# Description

Median with na.rm = TRUE

# Usage

```
median_rm(x)
```

# Arguments

Х

Input variable

# Value

Median value

# **Examples**

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

min\_rm

 $Min\ with\ na.rm = TRUE$ 

# Description

Min with na.rm = TRUE

# Usage

```
min\_rm(x)
```

# **Arguments**

Х

Input variable

# Value

Minimum value

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

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")

30 p25

nmissing

Number of missing values

# Description

Number of missing values

# Usage

```
nmissing(x)
```

# Arguments

Χ

Input variable

# Value

number of missing values

# **Examples**

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

p25

25th percentile

# Description

25th percentile

# Usage

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

# Arguments

Х

Input variable

na.rm

If TRUE missing values are removed before calculation

# Value

25th percentile

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

p75

p75 75th percentile

### **Description**

75th percentile

# Usage

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

### **Arguments**

x Input variable

na.rm If TRUE missing values are removed before calculation

#### Value

75th percentile

### **Examples**

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

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

# Arguments

x Return value from compare\_means

cm\_plots One or more plots ("bar", "box", or "density")
shiny Did the function call originate inside a shiny app
further arguments passed to or from other methods

#### **Details**

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

32 plot.compare\_props

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

### **Arguments**

| X        | Return value from compare_props                                  |
|----------|--|
| cp_plots | One or more plots of proportions or counts ("props" or "counts") |
| 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
```

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

plot.conjoint 33

| plot.conjoint | Plot method for the conjoint function |
|---------------|---------------------------------------|
| p=00.00J0=0   | The time the conjunction              |

### **Description**

Plot method for the conjoint function

#### Usage

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

shiny Did the function call originate inside a shiny app

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

#### **Details**

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

### See Also

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

#### **Examples**

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

plot.correlation

Plot method for the correlation function

# Description

Plot method for the correlation function

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

34 plot.cross\_tabs

#### **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, ct_check = "", shiny = FALSE, ...)
```

#### **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)

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

plot.explore 35

#### 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"))
newspaper %>% cross_tabs("Income", "Newspaper") %>% plot(c("observed","expected"))
```

plot.explore

Plot method for the explore function

# **Description**

Plot method for the explore function

#### Usage

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

# Arguments

```
x Return value from explore
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/explore.html for an example in Radiant. A plot will only be generated when a 'by' variable has been specified

### See Also

```
explore to generate summaries summary. explore to show summaries
```

```
result <- explore("diamonds", "price", expl_byvar = "cut", expl_fun = c("length", "skew"))
plot(result)</pre>
```

36 plot.glm\_predict

plot.full\_factor

Plot method for the full\_factor function

#### **Description**

Plot method for the full\_factor function

# Usage

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

#### **Arguments**

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

#### **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","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

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

plot.glm\_reg 37

#### **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  |
| •             | Create horizontally arranged subplots for each level of the selected factor variable  |
| •             | 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   |
| •             | 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
```

### **Examples**

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

plot.glm\_reg

Plot method for the glm\_reg function

## **Description**

Plot method for the glm\_reg function

38 plot.hier\_clus

#### **Usage**

```
## S3 method for class 'glm_reg'
plot(x, glm_plots = "", glm_conf_level = 0.95,
 glm_coef_int = FALSE, shiny = 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 Did the function call originate inside a shiny app shiny 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
```

## **Examples**

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

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,
  shiny = TRUE, ...)
```

plot.kmeans\_clus 39

### **Arguments**

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

#### **Details**

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

### See Also

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

## **Examples**

```
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)
shopping %>% hier_clus(hc_vars = c("v1:v6")) %>% plot
```

plot.kmeans\_clus

Plot method for kmeans\_clus

## **Description**

Plot method for kmeans\_clus

## Usage

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

## Arguments

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

## **Details**

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

40 plot.mds

### 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, ...)
```

## **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
```

```
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 41

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

## See Also

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

42 plot.regression

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
```

## **Examples**

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

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, shiny = FALSE, ...)
```

plot.regression 43

## **Arguments**

Х

| 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)

fault

shiny Did the function call originate inside a shiny app

Return value from regression

... 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"))
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(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")</pre>
```

44 plot.reg\_predict

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**

| X              | 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")
rm(dpred, envir = .GlobalEnv)</pre>
```

plot.single\_mean 45

| $n l \cap t$ | sing | $\Box$ | 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", shiny = FALSE, ...)
```

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

## **Details**

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

## See Also

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

## **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", shiny = FALSE, ...)
```

46 pmap

### 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

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

### **Details**

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

#### See Also

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

### **Examples**

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

ртар

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 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

predict.glm\_reg 47

#### **Details**

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

#### Value

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

#### See Also

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

## **Examples**

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

predict.glm\_reg

Predict method for the glm\_reg function

#### **Description**

Predict method for the glm\_reg function

## Usage

```
## $3 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 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 \verb|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
```

48 predict.regression

#### **Examples**

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

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, ...)
```

## **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)

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

### **Details**

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

# 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")
rm(dpred, envir = .GlobalEnv)
```

pre\_factor 49

| pre_factor | Evaluate if data are d | 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>
```

print.arrange

Exporting the print.arrange method from the gridExtra package

## **Description**

Exporting the print.arrange method from the gridExtra package

## **Details**

Used to print plots generated using arrangeGrob

50 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>

radiant

radiant

# **Description**

radiant

Launch Radiant in the default browser

## Usage

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

## Arguments

арр

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

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

regression 51

|--|

# 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
```

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

52 sample\_size

| 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                                      |  |

sampling 53

#### **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>
```

54 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**

```
result <- full_factor("diamonds",c("price","carat","table"))
save_factors(result)
head(diamonds)</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 55

## **Examples**

```
result <- glm_reg("titanic", "survived", "pclass", glm_levels = "Yes")
save_glm_resid(result)
head(titanic)</pre>
```

save\_membership

Add a cluster membership variable to the active dataset

## Description

Add a cluster membership variable to the active dataset

### Usage

```
save_membership(object)
```

## **Arguments**

object

Return value from kmeans\_clus

## **Details**

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

### See Also

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

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

56 sd\_rm

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**

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

 $sd_rm$ 

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

# Description

Standard deviation with na.rm = TRUE

## Usage

```
sd_rm(x)
```

# Arguments

Х

Input variable

### Value

Standard deviation

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

serr 57

serr

Standard error

# Description

Standard error

## Usage

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

# Arguments

x Input variable

na.rm

If TRUE missing values are removed before calculation

### Value

Standard error

# **Examples**

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

set\_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(.)))
```

sig\_stars

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))
```

single\_mean 59

|  | single_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")
```

60 skew

| single_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","cut")
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

sshh 61

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) )
```

62 state\_init

state\_init

Set initial value for shiny input

## Description

Set initial value for shiny input

## Usage

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

# **Arguments**

inputvar Name shiny input

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

## **Details**

Useful for radio button or checkbox

## Value

value for inputvar

### See Also

```
state_single
state_multiple
copy_from
```

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

state\_multiple 63

 $state\_multiple$ 

Set initial values for shiny input from a list of values

# Description

Set initial values for shiny input from a list of values

## Usage

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

## **Arguments**

inputvar Name shiny input

vals Possible values for inputvar

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

### **Details**

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

### Value

value for inputvar

### See Also

```
state_init
state_single
copy_from
```

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

64 state\_single

state\_single

Set initial value for shiny input from a list of values

## Description

Set initial value for shiny input from a list of values

## Usage

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

## **Arguments**

inputvar Name shiny input

vals Possible values for inputvar

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

### **Details**

Useful for select input with multiple = FALSE

# Value

value for inputvar

## See Also

```
state_init
state_multiple
copy_from
```

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

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)
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, ...)
```

### **Arguments**

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

66 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)
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, 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("mp3", ca_dep_var = "Rating", ca_indep_var = "Memory:Shape")
summary(result, ca_vif = TRUE)
mp3 %>% conjoint(ca_dep_var = "Rating", ca_indep_var = "Memory:Shape") %>% summary(., ca_vif = TRUE)
```

```
summary.conjoint_profiles
```

Summary method for the conjoint\_profiles function

## Description

Summary method for the conjoint\_profiles function

### Usage

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

## **Arguments**

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

## **Details**

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

## See Also

conjoint\_profiles to calculate results

# **Examples**

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

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, ...)
```

68 summary.cross\_tabs

### 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.

#### **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)
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, 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

summary.explore 69

### See Also

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

## **Examples**

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

summary.explore

Summary method for the explore function

# Description

Summary method for the explore function

### Usage

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

## **Arguments**

object Return value from explore
... 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 plot.explore to plot summaries
```

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

70 summary.glm\_reg

```
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)
diamonds %>% full_factor(c("price","carat","depth","table","x")) %>% summary
diamonds %>% full_factor(c("price","carat","depth","table","x")) %>% summary(ff_cutoff = .5)
```

summary.glm\_reg

Summary method for the glm\_reg function

## **Description**

Summary method for the glm\_reg function

summary.hier\_clus 71

#### Usage

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

#### **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 multi-collinearity 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"))
titanic %>% glm_reg("survived", c("pclass", "sex", "age"), glm_levels = "Yes") %>% summary("vif")
```

summary.hier\_clus

Summary method for the hier\_clus function

# Description

Summary method for the hier\_clus function

## Usage

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

### **Arguments**

```
object Return value from hier_clus
```

... further arguments passed to or from other methods

#### **Details**

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

#### See Also

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

### **Examples**

```
result <- hier_clus("shopping", hc_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

### **Details**

### 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)
shopping %>% kmeans_clus(km_vars = c("v1:v6"), km_nr_clus = 3) %>% summary
```

summary.mds 73

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)
city %>% mds("from", "to","distance") %>% summary
```

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, ...)
```

74 summary.pre\_factor

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

summary.regression 75

#### **Examples**

```
result <- pre_factor("diamonds",c("price","carat","table"))
summary(result)
diamonds %>% pre_factor(c("price","carat","table")) %>% summary
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 multi-collinearity diagnostics. "confint" to show coefficient confidence interval esti-

mates.

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
```

# **Examples**

```
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")
shopping %>% regression("v1", "v2:v6") %>% summary
```

76 summary.sampling

summary.sample\_size Summa

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

summary.single\_mean 77

#### See Also

```
sampling to generate the results
```

# **Examples**

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

summary.single\_mean

Summary method for the single\_mean function

# Description

Summary method for the single\_mean function

# Usage

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

## **Arguments**

object Return value from single\_mean

... further arguments passed to or from other methods

## **Details**

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

#### See Also

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

# **Examples**

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

78 superheroes

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)
diamonds %>% single_prop("clarity", sp_levels = "IF", sp_comp_value = 0.05) %>% summary
```

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")
```

test\_specs 79

test\_specs

Add interaction terms to list of test variables if needed

#### **Description**

Add interaction terms to list of test variables if needed

# Usage

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

## **Arguments**

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

int\_var Interaction terms specified

## **Details**

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

#### Value

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

# **Examples**

```
test_specs("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")

80 toothpaste

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")

var\_check 81

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

#### **Examples**

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

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 = "", shiny = FALSE)
```

82 win\_launcher

## **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")                         |
| shiny         | Did the function call originate inside a shiny app  |

## **Details**

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

## Value

Generated plots

# **Examples**

```
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")
diamonds %>% visualize(c("price", "carat", "depth"), viz_type = "density")
```

win\_launcher

Create a launcher for Windows (.bat)

# Description

Create a launcher for Windows (.bat)

# Usage

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

win\_launcher 83

## **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

# **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>
```

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