Package 'radiant'

March 21, 2015

```
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Description A platform-independent browser-
      based interface for business analytics in R, based on the Shiny package.
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      lubridate (>= 1.3.3),
      ggplot2 (>= 1.0.0),
      dplyr (>= 0.4.1),
      magrittr (>= 1.5)
Imports car (>= 2.0.22),
      MASS (>= 7.3),
      gridExtra (>= 0.9.1),
      AlgDesign (>= 1.1.7.3),
      GPArotation (>= 2014.11.1),
      psych (>= 1.4.8.11),
      wordcloud (>= 2.5),
      markdown (>= 0.7.4),
      knitr (>= 1.8),
      ggdendro (>= 0.1.15),
      broom (>= 0.3.6),
      tidyr (>= 0.2.0),
      pryr (>= 0.1),
      htmlwidgets (>= 0.3.2),
      rpivotTable (>= 0.1.2.6),
      shiny (>= 0.11.1),
      shinyAce (>= 0.2.1)
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      ggvis (>= 0.4),
      testthat (>= 0.9.1)
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BugReports https://github.com/vnijs/radiant/issues
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LazyData true
```

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Description

Function to calculate the PW and IW table for conjoint

Usage

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

4 changedata

Arguments

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

dat Conjoint data

ca_indep_var Independent variables used in the conjoint regression

Details

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

See Also

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

Examples

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

changedata

Change data

Description

Change data

Usage

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

Arguments

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

var_names Names for the new variables to add to the data.frame

Value

None

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

city 5

| | city | City distances | |
|--|------|----------------|--|
|--|------|----------------|--|

Description

City distances

Usage

```
data(city)
```

Format

A data frame with 45 rows and 3 variables

Details

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

| compare_means | Compare means for two or more variables | |
|---------------|---|--|
| | | |

Description

Compare means for two or more variables

Usage

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

Arguments

| dataset | Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant |
|----------------|--|
| cm_var1 | A numeric variable or factor selected for comparison |
| cm_var2 | One or more numeric variables for comparison. If cm_var1 is a factor only one variable can be selected and the mean of this variable is compared across (factor) levels of cm_var1 |
| data_filter | Expression entered in, e.g., Data $>$ View to filter the dataset in Radiant. The expression should be a string (e.g., "price $>$ 10000") |
| cm_paired | Are samples indepent ("independent") or not ("paired") |
| cm_alternative | The alternative hypothesis ("two.sided", "greater" or "less") |
| cm_sig_level | Span of the confidence interval |
| cm_adjust | Adjustment for multiple comparisons ("none" or "bonf" for Bonferroni) |

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Details

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

Value

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

See Also

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

Examples

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

compare_props

Compare proportions across groups

Description

Compare proportions across groups

Usage

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

Arguments

| dataset | Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant |
|----------------|--|
| cp_var1 | A grouping variable to split the data for comparisons |
| cp_var2 | The variable to calculate proportions for |
| data_filter | Expression entered in, e.g., Data > View to filter the dataset in Radiant. The expression should be a string (e.g., "price > 10000") |
| cp_levels | The factor level selected for the proportion comparison |
| cp_alternative | The alternative hypothesis ("two.sided", "greater" or "less") |
| cp_sig_level | Span of the confidence interval |
| cp_adjust | Adjustment for multiple comparisons ("none" or "bonf" for Bonferroni) |

Details

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

Value

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

computer 7

See Also

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

Examples

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

computer

Perceptions of computer (re)sellers

Description

Perceptions of computer (re)sellers

Usage

```
data(computer)
```

Format

A data frame with 5 rows and 8 variables

Details

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

conjoint

Conjoint analysis

Description

Conjoint analysis

Usage

```
conjoint(dataset, ca_dep_var, ca_indep_var, data_filter = "",
    ca_rev = FALSE)
```

Arguments

| dataset | Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant |
|--------------|--|
| ca_dep_var | The dependent variable (e.g., profile ratings) |
| ca_indep_var | Independent variables in the regression |
| data_filter | Expression entered in, e.g., Data $>$ View to filter the dataset in Radiant. The expression should be a string (e.g., "price $>$ 10000") |
| ca_rev | Reverse the values of the dependent variable ('ca_dep_var') |

8 conjoint_profiles

Details

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

Value

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

See Also

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

Examples

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

conjoint_profiles

Create fractional factorial design for conjoint analysis

Description

Create fractional factorial design for conjoint analysis

Usage

```
conjoint_profiles(dataset)
```

Arguments

dataset

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

Details

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

Value

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

See Also

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

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

correlation 9

| correlation Calculate correlations for two or more variables |
|--|
|--|

Description

Calculate correlations for two or more variables

Usage

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

Arguments

| dataset | Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant |
|-------------|--|
| cor_var | Variables to include in the analysis |
| data_filter | Expression entered in, e.g., Data > View to filter the dataset in Radiant. The expression should be a string (e.g., "price > 10000") |
| cor_type | Type of correlations to calculate. Options are "pearson", "spearman", and "kendall". "pearson" is the default |

Details

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

Value

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

See Also

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

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

10 diamonds

| cross | tabs |
|-------|------|
| | |

Evaluate associations between categorical variables

Description

Evaluate associations between categorical variables

Usage

```
cross_tabs(dataset, ct_var1, ct_var2, data_filter = "")
```

Arguments

| dataset | Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant |
|-------------|--|
| ct_var1 | A categorical variable |
| ct_var2 | Another categorical variable |
| data_filter | Expression entered in, e.g., Data > View to filter the dataset in Radiant. The expression should be a string (e.g., "price > 10000") |

Details

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

Value

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

See Also

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

Examples

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

diamonds

Diamond prices

Description

Diamond prices

Usage

```
data(diamonds)
```

ff_design 11

Format

A data frame with 3000 rows and 10 variables

Details

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

 ff_design

Function to generate a fractional factorial design

Description

Function to generate a fractional factorial design

Usage

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

Arguments

attr Attributes used to generate profiles

trial Number of trials that have already been run

rseed Random seed to use

Details

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

See Also

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

full_factor

Factor analysis (PCA)

Description

Factor analysis (PCA)

Usage

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

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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 |
|-------------|--|
| ff_var | Variables to include in the analysis |
| data_filter | Expression entered in, e.g., Data > View to filter the dataset in Radiant. The expression should be a string (e.g., "price > 10000") |
| ff_meth | Factor extraction method to use |
| ff_number | Number of factors to extract |
| ff_rotation | Apply varimax rotation or no rotation ("varimax" or "none") |

Details

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

Value

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

See Also

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

Examples

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

getdata

Get data for analysis functions

Description

Get data for analysis functions

Usage

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

Arguments

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

glm_reg

Value

Data.frame with specified columns and rows

Examples

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

glm_reg

Generalized linear models (GLM)

Description

Generalized linear models (GLM)

Usage

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

Arguments

| dataset | Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant |
|---------------|--|
| glm_dep_var | The dependent variable in the logit (probit) model |
| glm_indep_var | Independent variables in the model |
| data_filter | Expression entered in, e.g., Data > View to filter the dataset in Radiant. The expression should be a string (e.g., "price > 10000") |
| glm_levels | The level in the dependent variable defined as _success_ |
| glm_link | Link function for _glm_ ('logit' or 'probit'). 'logit' is the default |
| glm_int_var | Interaction term to include in the model (not implement) |
| glm_check | Optional output or estimation parameters. "vif" to show the multicollinearity diagnostics. "confint" to show coefficient confidence interval estimates. "odds" to show odds ratios and confidence interval estimates. "standardize" to output standardized coefficient estimates. "stepwise" to apply step-wise selection of variables |

Details

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

Value

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

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See Also

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

Examples

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

hier_clus

Hierarchical cluster analysis

Description

Hierarchical cluster analysis

Usage

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

Arguments

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

hc_vars Vector of variables to include in the analysis

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

hc_dist Distance hc_meth Method

Details

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

Value

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

See Also

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

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

kmeans_clus 15

| kmeans_clus | K-means cluster analysis | |
|-------------|--------------------------|--|
| | | |

Description

K-means cluster analysis

Usage

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

Arguments

| dataset | Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant |
|-------------|--|
| km_vars | Vector of variables to include in the analysis |
| data_filter | Expression entered in, e.g., Data > View to filter the dataset in Radiant. The expression should be a string (e.g., "price > 10000") |
| km_hc_init | Use centers from hier_clus as the starting point |
| km_dist | Distance for hier_clus |
| km_meth | Method for hier_clus |
| km_seed | Random see to use for kmeans if km_hc_init is FALSE |
| km_nr_clus | Number of clusters to extract |

Details

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

Value

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

See Also

```
summary.kmeans_clus to summarize results
plot.kmeans_clus to plot results
save_kmeans to save the table of cluster means to a csv file
save_membership to add cluster membership to the selected dataset
```

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

16 mac_launcher

kurtosi

Exporting the kurtosi function from the psych package

Description

Exporting the kurtosi function from the psych package

mac_launcher

Create a launcher for Mac (.command)

Description

Create a launcher for Mac (.command)

Usage

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

Arguments

app

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

Details

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

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

mds 17

mds (Dis)similarity based brand maps (MDS)

Description

(Dis)similarity based brand maps (MDS)

Usage

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

Arguments

| dataset | Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant |
|----------------|--|
| mds_id1 | A character variable or factor with unique entries |
| mds_id2 | A character variable or factor with unique entries |
| mds_dis | A numeric measure of brand dissimilarity |
| data_filter | Expression entered in, e.g., Data $>$ View to filter the dataset in Radiant. The expression should be a string (e.g., "price $>$ 10000") |
| mds_method | Apply metric or non-metric MDS |
| mds_dim_number | Number of dimensions |

Details

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

Value

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

See Also

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

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

18 mergedata

| me | rge | ≥da | ata |
|----|-----|-----|-----|

Merge datasets using dplyr's join functions

Description

Merge datasets using dplyr's join functions

Usage

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

Arguments

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

element in an r_data list from Radiant

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

global environment or an element in an r_data list from Radiant

merge_vars Variables used to merge/join 'dataset' and 'dataset2'

merge_type The main join types from the dplyr package are provided. 'inner_join' returns

all rows from x with matching values in y, and all columns from x and y. If there are multiple matches between x and y, all match combinations are returned. 'left_join' returns all rows from x, and all columns from x and y. If there are multiple matches between x and y, all match combinations are returned. 'semi_join' returns all rows from x with matching values in y, keeping just columns from x. A semi join differs from an inner join because an inner join will return one row of x for each matching row of y, whereas a semi join will never duplicate rows of x. 'anti_join' returns all rows from x without matching values in y, keeping

only columns from x

merge_name Name for the merged dataset

Details

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

Value

If (reactive) list 'r_data' exists the merged dataset added as 'merge_name'. Else the merged dataset will be returned as 'merge_name'

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

mp3

mp3

Conjoint data for MP3 players

Description

Conjoint data for MP3 players

Usage

data(mp3)

Format

A data frame with 18 rows and 6 variables

Details

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

newspaper

Newspaper readership

Description

Newspaper readership

Usage

data(newspaper)

Format

A data frame with 580 rows and 2 variables

Details

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

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plot.compare_means

Plot method for the compare_means function

Description

Plot method for the compare_means function

Usage

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

Arguments

x Return value from compare_means
 cm_plots One or more plots ("bar", "box", or "density")
 ... further arguments passed to or from other methods

Details

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

See Also

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

Examples

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

plot.compare_props

Plot method for the compare_props function

Description

Plot method for the compare_props function

Usage

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

Arguments

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

plot.conjoint 21

Details

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

See Also

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

Examples

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

plot.conjoint

Plot method for the conjoint function

Description

Plot method for the conjoint function

Usage

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

Arguments

```
    x Return value from conjoint
    ca_plots Show either the part-worth ("pw") or importance-weights ("iw") plot
    ca_scale_plot Scale the axes of the part-worth plots to the same range
    further arguments passed to or from other methods
```

Details

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

See Also

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

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

22 plot.cross_tabs

plot.correlation

Plot method for the correlation function

Description

Plot method for the correlation function

Usage

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

Arguments

x Return value from correlation

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

Details

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

See Also

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

Examples

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

plot.cross_tabs

Plot method for the cross_tabs function

Description

Plot method for the cross_tabs function

Usage

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

plot.full_factor 23

Arguments

x Return value from cross_tabs

ct_check Show plots for variables ct_var1 and ct_var2. "observed" for the observed fre-

quencies table, "expected" for the expected frequencies table (i.e., frequencies that would be expected if the null hypothesis holds), "chi_sq" for the contribution to the overall chi-squared statistic for each cell (i.e., $(o - e)^2 / e$), "dev_std" for the standardized differences between the observed and expected frequencies (i.e., (o - e) / sqrt(e)), and "dev_perc" for the percentage difference between the

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

... further arguments passed to or from other methods

Details

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

See Also

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

Examples

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

plot.full_factor

Plot method for the full_factor function

Description

Plot method for the full_factor function

Usage

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

Arguments

x Return value from full_factor

... further arguments passed to or from other methods

Details

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

See Also

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

24 plot.glm_predict

Examples

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

plot.glm_predict

Plot method for the predict.glm_reg function

Description

Plot method for the predict.glm_reg function

Usage

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

Arguments

| x | Return value from predict.glm_reg. |
|---------------------------|---|
| glm_xvar | Variable to display along the X-axis of the plot |
| glm_facet_row | Create vertically arranged subplots for each level of the selected factor variable |
| glm_facet_col | Create horizontally arranged subplots for each level of the selected factor variable |
| glm_color | Adds color to a scatter plot to generate a heat map. For a line plot one line is created for each group and each is assigned a different colour |
| <pre>glm_conf_level</pre> | Confidence level to use for prediction intervals (.95 is the default). Note that the error bars for predictions are approximations at this point. |
| | further arguments passed to or from other methods |

Details

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

See Also

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

plot.glm_reg 25

Examples

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

plot.glm_reg

Plot method for the glm_reg function

Description

Plot method for the glm_reg function

Usage

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

Arguments

Return value from glm_reg

glm_plots

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

glm_conf_level

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

glm_coef_int

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

further arguments passed to or from other methods

Details

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

26 plot.hier_clus

See Also

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

Examples

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

plot.hier_clus

Plot method for the hier_clus function

Description

Plot method for the hier_clus function

Usage

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

Arguments

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

Details

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

See Also

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

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

plot.kmeans_clus 27

plot.kmeans_clus

Plot method for kmeans_clus

Description

Plot method for kmeans_clus

Usage

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

Arguments

x Return value from kmeans_clus

... further arguments passed to or from other methods

Details

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

See Also

```
kmeans_clus to generate results
summary.kmeans_clus to summarize results
save_kmeans to save the table of cluster means to a csv file
save_membership to add cluster membership to the selected dataset
```

Examples

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

plot.mds

Plot method for the mds function

Description

Plot method for the mds function

Usage

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

28 plot.pmap

Arguments

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

Details

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

See Also

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

Examples

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

plot.pmap

Plot method for the pmap function

Description

Plot method for the pmap function

Usage

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

Arguments

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

Details

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

plot.pre_factor 29

See Also

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

Examples

plot.pre_factor

Plot method for the pre_factor function

Description

Plot method for the pre_factor function

Usage

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

Arguments

x Return value from pre_factor... further arguments passed to or from other methods

Details

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

See Also

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

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

30 plot.regression

plot.regression

Plot method for the regression function

Description

Plot method for the regression function

Usage

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

Arguments

Return value from regression

reg_plots

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

reg_lines

Optional lines to include in the select plot. "line" to include a line through a scatter plot. "loess" to include a polynomial regression fit line. To include both use c("line","loess")

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

reg_coef_int

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

fault

further arguments passed to or from other methods . . .

Details

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

See Also

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

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

plot.reg_predict 31

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

plot.reg_predict

Plot method for the predict.regression function

Description

Plot method for the predict.regression function

Usage

```
## S3 method for class 'reg_predict'
plot(x, reg_xvar = "", reg_facet_row = ".",
    reg_facet_col = ".", reg_color = "none", reg_conf_level = 0.95, ...)
```

Arguments

| Χ | Return value from predict.regression. |
|----------------|---|
| reg_xvar | Variable to display along the X-axis of the plot |
| reg_facet_row | Create vertically arranged subplots for each level of the selected factor variable |
| reg_facet_col | Create horizontally arranged subplots for each level of the selected factor variable |
| reg_color | Adds color to a scatter plot to generate a heat map. For a line plot one line is created for each group and each is assigned a different colour |
| reg_conf_level | Confidence level to use for prediction intervals (.95 is the default). Note that the error bars for predictions are approximations at this point. |
| • • • | further arguments passed to or from other methods |

Details

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

See Also

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

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

32 plot.single_prop

plot.single_mean

Plot method for the single_mean function

Description

Plot method for the single_mean function

Usage

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

Arguments

x Return value from single_mean

sm_plots Plots to generate. "hist" shows a histogram of the data along with vertical lines

that indicate the sample mean and the confidence interval. "simulate" shows the location of the sample mean and the comparison value (sm_comp_value). Simulation is used to demonstrate the sampling variability in the data under the

null-hypothesis

... further arguments passed to or from other methods

Details

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

See Also

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

Examples

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

plot.single_prop

Plot method for the single_prop function

Description

Plot method for the single_prop function

Usage

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

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Arguments

x Return value from single_prop

sp_plots Plots to generate. "hist" shows a histogram of the data along with vertical

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

in the data under the null-hypothesis

... further arguments passed to or from other methods

Details

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

See Also

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

Examples

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

pmap

Attribute based brand maps

Description

Attribute based brand maps

Usage

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

Arguments

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

element in an r_data list from Radiant

pmap_brand A character variable with brand names

pmap_attr Names of numeric variables

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

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

pmap_pref Names of numeric brand preference measures

pmap_dim_number

Number of dimensions

Details

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

34 predict.glm_reg

Value

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

See Also

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

Examples

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

predict.glm_reg

Predict method for the glm_reg function

Description

Predict method for the glm_reg function

Usage

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

Arguments

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

Generate predictions using a command. For example, 'pclass = levels(pclass)' would produce predictions for the different levels of factor 'pclass'. To add another variable use a ',' (e.g., 'pclass = levels(pclass), age = seq(0,100,20)')

glm_predict_data

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

.. further arguments passed to or from other methods

Details

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

See Also

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

predict.regression 35

Examples

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

predict.regression

Predict method for the regression function

Description

Predict method for the regression function

Usage

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

Arguments

```
object Return value from regression

reg_predict_cmd

Command used to generate data for prediction

reg_predict_data

Name of the dataset to use for prediction

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

reg_save_pred Save predicted values to a csv file

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

Details

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

See Also

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

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

36 radiant

pre_factor

Evaluate if data are appropriate for PCA / Factor analysis

Description

Evaluate if data are appropriate for PCA / Factor analysis

Usage

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

Arguments

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

element in an r_data list from Radiant

pf_var Variables to include in the analysis

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

Details

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

Value

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

See Also

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

Examples

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

radiant

radiant

Description

radiant

Launch Radiant in the default browser

Usage

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

regression 37

Arguments

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

the default

Details

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

Examples

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

regression

Linear regression using OLS

Description

Linear regression using OLS

Usage

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

Arguments

| dataset | Dataset name (string). This can be a dataframe in the global environment or an element in an r_data list from Radiant |
|---------------|--|
| reg_dep_var | The dependent variable in the regression |
| reg_indep_var | Independent variables in the regression |
| data_filter | Expression entered in, e.g., Data > View to filter the dataset in Radiant. The expression should be a string (e.g., "price > 10000") |
| reg_int_var | Interaction terms to include in the model |
| reg_check | "standardize" to see standardized coefficient estimates. "stepwise" to apply stepwise selection of variables in estimation |

Details

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

Value

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

See Also

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

38 sample_size

Examples

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

rndnames

100 random names

Description

100 random names

Usage

```
data(rndnames)
```

Format

A data frame with 100 rows and 2 variables

Details

A list of 100 random names generated by **listofrandomnames.com**. Description provided in attr(rndnames, "description")

sample_size

Sample size calculation

Description

Sample size calculation

Usage

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

Arguments

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

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Details

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

Value

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

See Also

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

Examples

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

sampling

Simple random sampling

Description

Simple random sampling

Usage

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

Arguments

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

element in an r_data list from Radiant

smp_var The variable to sample from

 ${\tt smp_sample_size}$

Number of units to select

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

smp_print_full Print full sampling frame. Default is TRUE

Details

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

Value

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

See Also

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

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

40 save_glm_resid

save_factors

Save factor scores to active dataset

Description

Save factor scores to active dataset

Usage

```
save_factors(object)
```

Arguments

object

Return value from full_factor

Details

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

Examples

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

save_glm_resid

Save residuals generated in the glm_reg function

Description

Save residuals generated in the glm_reg function

Usage

```
save_glm_resid(object)
```

Arguments

object

Return value from glm_reg

Details

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

save_kmeans 41

Examples

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

save_kmeans

Save cluster means to a csv file

Description

Save cluster means to a csv file

Usage

```
save_kmeans(object, file = "kmeans.csv")
```

Arguments

object Return value from kmeans_clus

file Filename and path to use

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
save_membership to add cluster membership to the selected dataset
```

```
result <- kmeans_clus("shopping", km_vars = c("v1:v6"))
save_kmeans(result, file = "~/shopping_kmeans.csv")</pre>
```

save_reg_resid

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
save_kmeans to save the table of cluster means to a csv file
```

Examples

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

save_reg_resid

Save regression residuals

Description

Save regression residuals

Usage

```
save_reg_resid(object)
```

Arguments

object

Return value from regression

set_class 43

Details

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

Examples

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

set_class

Alias used to set the class for analysis function return

Description

Alias used to set the class for analysis function return

Usage

```
set_class()
```

Examples

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

shopping

Shopping attitudes

Description

Shopping attitudes

Usage

```
data(shopping)
```

Format

A data frame with 20 rows and 7 variables

Details

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

44 single_mean

| sig_stars Add stars '***' to a data.f on p.values | rame (from broom's 'tidy' function) based |
|---|---|
|---|---|

Description

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

Usage

```
sig_stars(pval)
```

Arguments

pval

Vector of p-values

Details

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

Value

A vector of stars

Examples

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

 $single_mean$

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 |

single_prop 45

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
```

Examples

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

| | | 7 | | |
|-----|----|----------------------|----|-----|
| C 1 | nσ | le_ | nr | °∩n |
| 91 | | $_{\perp}$ $_{\sim}$ | יש | VΡ |

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 ar 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

46 sshh

See Also

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

Examples

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

skew

Exporting the skew function from the psych package

Description

Exporting the skew function from the psych package

sshh

Hide warnings and messages and return invisible

Description

Hide warnings and messages and return invisible

Usage

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

Arguments

... Inputs to keep quite

Details

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

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

sshhr 47

sshhr

Hide warnings and messages and return result

Description

Hide warnings and messages and return result

Usage

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

Arguments

... Inputs to keep quite

Details

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

Examples

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

 $\verb|summary.compare_means| \textit{Summary method for the compare_means function}|$

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
```

48 summary.conjoint

Examples

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

 $summary.compare_props \ \ \textit{Summary method for the compare_props function}$

Description

Summary method for the compare_props function

Usage

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

Arguments

object Return value from compare_props

... further arguments passed to or from other methods

Details

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

See Also

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

Examples

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

summary.conjoint

Summary method for the conjoint function

Description

Summary method for the conjoint function

Usage

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

Arguments

```
object Return value from conjoint
ca_vif Shows multicollinearity diagnostics.
... further arguments passed to or from other methods
```

Details

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

See Also

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

Examples

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

```
summary.conjoint_profiles
```

Summary method for the conjoint_profiles function

Description

Summary method for the conjoint_profiles function

Usage

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

Arguments

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

Details

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

See Also

```
conjoint_profiles to calculate results
```

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

50 summary.cross_tabs

summary.correlation Summary method for the correlation function

Description

Summary method for the correlation function

Usage

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

Arguments

object Return value from correlation

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

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

Details

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

See Also

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

Examples

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

summary.cross_tabs

Summary method for the cross_tabs function

Description

Summary method for the cross_tabs function

Usage

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

summary.full_factor 51

Arguments

object Return value from cross_tabs

ct_check Show table(s) for variables ct_var1 and ct_var2. "observed" for the observed fre-

quencies table, "expected" for the expected frequencies table (i.e., frequencies that would be expected if the null hypothesis holds), "chi_sq" for the contribution to the overall chi-squared statistic for each cell (i.e., $(o - e)^2 / e$), "dev_std" for the standardized differences between the observed and expected frequencies (i.e., (o - e) / sqrt(e)), and "dev_perc" for the percentage difference between the

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

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

Details

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

See Also

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

Examples

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

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

52 summary.glm_reg

See Also

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

Examples

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

summary.glm_reg

Summary method for the glm_reg function

Description

Summary method for the glm_reg function

Usage

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

Arguments

object Return value from glm_reg

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

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

glm_test_var Variables to evaluate in model comparison (i.e., a competing models Chi-squared test)

... further arguments passed to or from other methods

Details

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

See Also

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

summary.hier_clus 53

Examples

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

summary.hier_clus

Summary method for the hier_clus function

Description

Summary method for the hier_clus function

Usage

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

Arguments

object Return value from hier_clus

... further arguments passed to or from other methods

Details

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

See Also

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

Examples

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

 ${\tt summary.kmeans_clus}$

Summary method for kmeans_clus

Description

Summary method for kmeans_clus

Usage

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

54 summary.mds

Arguments

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

Details

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

See Also

```
kmeans_clus to generate results
plot.kmeans_clus to plot results
save_kmeans to save the table of cluster means to a csv file
save_membership to add cluster membership to the selected dataset
```

Examples

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

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
```

summary.pmap 55

Examples

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

summary.pmap

Summary method for the pmap function

Description

Summary method for the pmap function

Usage

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

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
```

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

56 summary.regression

summary.pre_factor

Summary method for the pre_factor function

Description

Summary method for the pre_factor function

Usage

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

Arguments

object Return value from pre_factor

... further arguments passed to or from other methods

Details

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

See Also

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

Examples

```
result <- pre_factor("diamonds",c("price","carat","table"))
summary(result)
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

```
## $3 method for class 'regression'
summary(object, reg_sum_check = "",
    reg_conf_level = 0.95, reg_test_var = "", ...)
```

summary.sample_size 57

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 estimates.

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

reg_test_var Variables to evaluate in model comparison (i.e., a competing models F-test)

... further arguments passed to or from other methods

Details

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

See Also

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

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")</pre>
```

summary.sample_size

Summary method for the sample size function

Description

Summary method for the sample_size function

Usage

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

Arguments

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

Details

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

58 summary.sampling

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
```

See Also

```
sampling to generate the results
```

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

summary.single_mean 59

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)</pre>
```

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

60 test_check

Details

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

See Also

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

Examples

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

test_check

Add interaction terms to list of test variables if needed

Description

Add interaction terms to list of test variables if needed

Usage

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

Arguments

test_var List of variables to use for testing for _regression_ or _glm_

int_var Interaction terms specified

Details

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

Value

'test_var' is a vector of variables to test

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

titanic 61

titanic

Survival data for the Titanic

Description

Survival data for the Titanic

Usage

```
data(titanic)
```

Format

A data frame with 1309 rows and 11 variables

Details

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

titanic_pred

Predict survival

Description

Predict survival

Usage

```
data(titanic_pred)
```

Format

A data frame with 6 rows and 3 variables

Details

Prediction data.frame for glm_reg based on the Titanic dataset

62 var_check

toothpaste

Toothpaste attitudes

Description

Toothpaste attitudes

Usage

```
data(toothpaste)
```

Format

A data frame with 60 rows and 10 variables

Details

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

var_check

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

Description

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

Usage

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

Arguments

indep_var List of independent variables provided to _regression_ or _glm_

cn Column names for all independent variables in _dat_

int_var Interaction terms specified

Details

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

Value

'vars' is a vector of right-hand side variables, possibly with interactions, 'indep_var' is the list of indepdent variables, and int_var are interaction terms

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

visualize 63

| visualize Visualize data using ggplot2 http://docs.ggplot2.org/cu |
|---|
|---|

Description

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

Usage

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

Arguments

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

Details

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

Value

Generated plots

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

64 win_launcher

win_launcher

Create a launcher for Windows (.bat)

Description

Create a launcher for Windows (.bat)

Usage

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

Arguments

арр

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

Details

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

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