

# Package ‘radiant.multivariate’

June 29, 2017

**Type** Package

**Title** Multivariate Menu for Radiant: Business Analytics using R and Shiny

**Version** 0.8.1

**Date** 2017-5-16

**Description** The Radiant Multivariate menu includes interfaces for perceptual mapping, factor analysis, cluster analysis, and conjoint analysis. The application extends the functionality in radiant.data.

**Depends** R (>= 3.3.0),  
radiant.data (>= 0.8.1)

**Imports** radiant.model (>= 0.8.0),  
shiny (>= 1.0.0),  
dplyr (>= 0.5),  
ggplot2 (>= 2.0.0),  
gridExtra (>= 2.0.0),  
scales (>= 0.4.0),  
magrittr (>= 1.5),  
psych (>= 1.6.6),  
GPArotation (>= 2014.11-1),  
car (>= 2.1.1),  
MASS (>= 7.3),  
wordcloud (>= 2.5),  
import (>= 1.1.0),  
Gmedian (>= 1.2.3),  
pryr (>= 0.1.2),  
methods

**Suggests** testthat (>= 1.0.0)

**URL** <https://github.com/radiant-rstats/radiant.multivariate>, <https://radiant-rstats.github.io/docs>

**BugReports** <https://github.com/radiant-rstats/radiant.multivariate/issues>

**License** AGPL-3 | file LICENSE

**LazyData** true

**RoxygenNote** 6.0.1

**R topics documented:**

carpet . . . . .	3
city . . . . .	3
city2 . . . . .	4
clean_loadings . . . . .	4
computer . . . . .	5
conjoint . . . . .	5
full_factor . . . . .	6
hclus . . . . .	7
kclus . . . . .	8
mds . . . . .	9
movie . . . . .	10
mp3 . . . . .	10
plot.conjoint . . . . .	11
plot.full_factor . . . . .	12
plot.hclus . . . . .	13
plot.kclus . . . . .	14
plot.mds . . . . .	15
plot.pmap . . . . .	15
plot.pre_factor . . . . .	16
pmap . . . . .	17
predict.conjoint . . . . .	18
predict_conjoint_by . . . . .	19
pre_factor . . . . .	20
print.conjoint.predict . . . . .	20
radiant.multivariate . . . . .	21
radiant.multivariate-deprecated . . . . .	21
retailers . . . . .	22
shopping . . . . .	22
store.conjoint . . . . .	23
store.conjoint.predict . . . . .	23
store.conjoint.predict.by . . . . .	24
store.full_factor . . . . .	24
store.kclus . . . . .	25
summary.conjoint . . . . .	26
summary.full_factor . . . . .	27
summary.hclus . . . . .	28
summary.kclus . . . . .	28
summary.mds . . . . .	29
summary.pmap . . . . .	30
summary.pre_factor . . . . .	31
the_table . . . . .	31
toothpaste . . . . .	32
tpbrands . . . . .	33

---

`carpet`*Carpet cleaners*

---

**Description**

Carpet cleaners

**Usage**

```
data(carpet)
```

**Format**

A data frame with 18 rows and 5 variables

**Details**

Rankings reflect the evaluation of 18 alternative carpet cleaners by one respondent. Description provided in `attr(carpet,"description")`

---

`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")`

---

city2	<i>City distances 2</i>
-------	-------------------------

---

**Description**

City distances 2

**Usage**

```
data(city2)
```

**Format**

A data frame with 78 rows and 3 variables

**Details**

Distance in miles between 12 cities in the USA. The dataset is used to illustrate multi-dimensional scaling (MDS). Description provided in attr(city2,"description")

---

clean_loadings	<i>Sort and clean loadings</i>
----------------	--------------------------------

---

**Description**

Sort and clean loadings

**Usage**

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

**Arguments**

floadings	Data frame with loadings
cutoff	Show only loadings with (absolute) values above cutoff (default = 0)
fsort	Sort factor loadings
dec	Number of decimals to show

**Details**

See [https://radiant-rstats.github.io/docs/multivariate/full\\_factor.html](https://radiant-rstats.github.io/docs/multivariate/full_factor.html) for an example in Radiant

**Examples**

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

---

computer	<i>Perceptions of computer (re)sellers</i>
----------	--

---

**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	<i>Conjoint analysis</i>
----------	--------------------------

---

**Description**

Conjoint analysis

**Usage**

```
conjoint(dataset, rvar, evar, int = "", by = "none", reverse = FALSE,
  data_filter = "")
```

**Arguments**

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an <code>r_data</code> list from Radiant
rvar	The response variable (e.g., profile ratings)
evar	Explanatory variables in the regression
int	Interaction terms to include in the model
by	Variable to group data by before analysis (e.g., a respondent id)
reverse	Reverse the values of the response variable ('rvar')
data_filter	Expression entered in, e.g., Data > View to filter the dataset in Radiant. The expression should be a string (e.g., "price > 10000")

**Details**

See <https://radiant-rstats.github.io/docs/multivariate/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("mp3", rvar = "Rating", evar = "Memory:Shape")
result <- mp3 %>% conjoint(rvar = "Rating", evar = "Memory:Shape")
```

---

full_factor	<i>Factor analysis (PCA)</i>
-------------	------------------------------

---

**Description**

Factor analysis (PCA)

**Usage**

```
full_factor(dataset, vars, method = "PCA", nr_fact = 1,
  rotation = "varimax", data_filter = "")
```

**Arguments**

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an <code>r_data</code> list from Radiant
vars	Variables to include in the analysis
method	Factor extraction method to use
nr_fact	Number of factors to extract
rotation	Apply varimax rotation or no rotation ("varimax" or "none")
data_filter	Expression entered in, e.g., Data > View to filter the dataset in Radiant. The expression should be a string (e.g., "price > 10000")

**Details**

See [https://radiant-rstats.github.io/docs/multivariate/full\\_factor.html](https://radiant-rstats.github.io/docs/multivariate/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"), method = "maxlik")
result <- diamonds %>% full_factor(c("price","carat","table","x","y"), method = "maxlik")
```

---

hclus

*Hierarchical cluster analysis*

---

## Description

Hierarchical cluster analysis

## Usage

```
hclus(dataset, vars, distance = "sq.euclidian", method = "ward.D",
       max_cases = 5000, data_filter = "")
```

## Arguments

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an <code>r_data</code> list from Radiant
vars	Vector of variables to include in the analysis
distance	Distance
method	Method
max_cases	Maximum number of cases allowed (default is 1000)
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 <https://radiant-rstats.github.io/docs/multivariate/hclus.html> for an example in Radiant

## Value

A list of all variables used in `hclus` as an object of class `hclus`

## See Also

[summary.hclus](#) to summarize results

[plot.hclus](#) to plot results

## Examples

```
result <- hclus("shopping", vars = "v1:v6")
```

kclus

*K-clustering*

---

**Description**

K-clustering

**Usage**

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

**Arguments**

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an <code>r_data</code> list from Radiant
vars	Vector of variables to include in the analysis
fun	Function to use: "mean" or "median"
hc_init	Use centers from hclus as the starting point
distance	Distance for hclus
method	Method for hclus
seed	Random see to use for k-clustering if <code>hc_init</code> is FALSE
nr_clus	Number of clusters to extract
data_filter	Expression entered in, e.g., Data > View to filter the dataset in Radiant. The expression should be a string (e.g., "price > 10000")

**Details**

See <https://radiant-rstats.github.io/docs/multivariate/kclus.html> for an example in Radiant

**Value**

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

**See Also**

`summary.kclus` to summarize results

`plot.kclus` to plot results

`store.kclus` to add cluster membership to the selected dataset

**Examples**

```
result <- kclus("shopping", c("v1:v6"))
```



---

mds	(Dis)similarity based brand maps (MDS)
-----	--

---

## Description

(Dis)similarity based brand maps (MDS)

## Usage

```
mds(dataset, id1, id2, dis, method = "metric", nr_dim = 2, seed = 1234,  
      data_filter = "")
```

## Arguments

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an <code>r_data</code> list from Radiant
id1	A character variable or factor with unique entries
id2	A character variable or factor with unique entries
dis	A numeric measure of brand dissimilarity
method	Apply metric or non-metric MDS
nr_dim	Number of dimensions
seed	Random seed
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 <https://radiant-rstats.github.io/docs/multivariate/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)
```

---

movie

*Conjoint data for Movie theaters*

---

**Description**

Conjoint data for Movie theaters

**Usage**

```
data(movie)
```

**Format**

A data frame with 18 rows and 6 variables

**Details**

Rankings reflect the evaluation of 18 alternative movie theaters by one respondent. Description provided in `attr(movie,"description")`

---

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**

Ratings reflect the evaluation of 18 alternative MP3 players by one respondent. Description provided in `attr(mp3,"description")`

---

plot.conjoint	<i>Plot method for the conjoint function</i>
---------------	--

---

## Description

Plot method for the conjoint function

## Usage

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

## Arguments

x	Return value from <a href="#">conjoint</a>
plots	Show either the part-worth ("pw") or importance-weights ("iw") plot
show	Level in by variable to analyse (e.g., a specific respondent)
scale_plot	Scale the axes of the part-worth plots to the same range
shiny	Did the function call originate inside a shiny app
custom	Logical (TRUE, FALSE) to indicate if ggplot object (or list of ggplot objects) should be returned. This option can be used to customize plots (e.g., add a title, change x and y labels, etc.). See examples and <a href="http://docs.ggplot2.org/">http://docs.ggplot2.org/</a> for options.
...	further arguments passed to or from other methods

## Details

See <https://radiant-rstats.github.io/docs/multivariate/conjoint.html> for an example in Radiant

## See Also

[conjoint](#) to generate results  
[summary.conjoint](#) to summarize results

## Examples

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

---

plot.full_factor	<i>Plot method for the full_factor function</i>
------------------	---

---

## Description

Plot method for the full\_factor function

## Usage

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

## Arguments

x	Return value from <a href="#">full_factor</a>
shiny	Did the function call originate inside a shiny app
custom	Logical (TRUE, FALSE) to indicate if ggplot object (or list of ggplot objects) should be returned. This option can be used to customize plots (e.g., add a title, change x and y labels, etc.). See examples and <a href="http://docs.ggplot2.org/">http://docs.ggplot2.org/</a> for options.
...	further arguments passed to or from other methods

## Details

See [https://radiant-rstats.github.io/docs/multivariate/full\\_factor.html](https://radiant-rstats.github.io/docs/multivariate/full_factor.html) for an example in Radiant

## See Also

[full\\_factor](#) to calculate results

[plot.full\\_factor](#) to plot results

## Examples

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

plot.hclus

*Plot method for the hclus function***Description**

Plot method for the hclus function

**Usage**

```
## S3 method for class 'hclus'
plot(x, plots = c("scree", "change"), cutoff = 0.05,
     shiny = FALSE, custom = FALSE, ...)
```

**Arguments**

x	Return value from <a href="#">hclus</a>
plots	Plots to return. "change" shows the percentage change in within-cluster heterogeneity as respondents are grouped into different number of clusters, "dendro" shows the dendrogram, "scree" shows a scree plot of within-cluster heterogeneity
cutoff	For large datasets plots can take time to render and become hard to interpret. By selection a cutoff point (e.g., 0.05 percent) the initial steps in hierarchical cluster analysis are removed from the plot
shiny	Did the function call originate inside a shiny app
custom	Logical (TRUE, FALSE) to indicate if ggplot object (or list of ggplot objects) should be returned. This option can be used to customize plots (e.g., add a title, change x and y labels, etc.). See examples and <a href="http://docs.ggplot2.org/">http://docs.ggplot2.org/</a> for options.
...	further arguments passed to or from other methods

**Details**

See <https://radiant-rstats.github.io/docs/multivariate/hclus.html> for an example in Radiant

**See Also**

[hclus](#) to generate results  
[summary.hclus](#) to summarize results

**Examples**

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

plot.kclus

*Plot method for kclus***Description**

Plot method for kclus

**Usage**

```
## S3 method for class 'kclus'
plot(x, plots = "density", shiny = FALSE, custom = FALSE,
     ...)
```

**Arguments**

x	Return value from <a href="#">kclus</a>
plots	One of "density", "bar", or "scatter")
shiny	Did the function call originate inside a shiny app
custom	Logical (TRUE, FALSE) to indicate if ggplot object (or list of ggplot objects) should be returned. This option can be used to customize plots (e.g., add a title, change x and y labels, etc.). See examples and <a href="http://docs.ggplot2.org/">http://docs.ggplot2.org/</a> for options.
...	further arguments passed to or from other methods

**Details**

See <https://radiant-rstats.github.io/docs/multivariate/kclus.html> for an example in Radiant

**See Also**

[kclus](#) to generate results

[summary.kclus](#) to summarize results

[store.kclus](#) to add cluster membership to the selected dataset

**Examples**

```
result <- kclus("shopping", vars = c("v1:v6"))
plot(result)
shopping %>% kclus(, vars = c("v1:v6")) %>% plot
```

---

plot.mds	<i>Plot method for the mds function</i>
----------	---

---

**Description**

Plot method for the mds function

**Usage**

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

**Arguments**

x	Return value from <a href="#">mds</a>
rev_dim	Flip the axes in plots
fontsz	Font size to use in plots
...	further arguments passed to or from other methods

**Details**

See <https://radiant-rstats.github.io/docs/multivariate/mds.html> for an example in Radiant

**See Also**

[mds](#) to calculate results  
[summary.mds](#) to plot results

**Examples**

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

---

plot.pmap	<i>Plot method for the pmap function</i>
-----------	--

---

**Description**

Plot method for the pmap function

**Usage**

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

**Arguments**

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

**Details**

See <https://radiant-rstats.github.io/docs/multivariate/pmap.html> for an example in Radiant

**See Also**

[pmap](#) to calculate results  
[summary.pmap](#) to plot results

**Examples**

```
result <- pmap("computer", "brand", "high_end:business")
plot(result, plots = "brand")
plot(result, plots = c("brand", "attr"))
plot(result, plots = c("brand", "attr"))
plot(result, scaling = 1, plots = c("brand", "attr"))
result <- pmap("computer", "brand", "high_end:dated",
              pref = c("innovative", "business"))
plot(result, plots = c("brand", "attr", "pref"))
```

---

plot.pre_factor	<i>Plot method for the pre_factor function</i>
-----------------	--

---

**Description**

Plot method for the pre\_factor function

**Usage**

```
## S3 method for class 'pre_factor'
plot(x, plots = c("scree", "change"), cutoff = 0.2,
     shiny = FALSE, custom = FALSE, ...)
```

**Arguments**

x	Return value from <a href="#">pre_factor</a>
plots	Plots to return. "change" shows the change in eigenvalues as variables are grouped into different number of factors, "scree" shows a scree plot of eigenvalues



cutoff	For large datasets plots can take time to render and become hard to interpret. By selection a cutoff point (e.g., eigenvalues of .8 or higher) factors with the least explanatory power are removed from the plot
shiny	Did the function call originate inside a shiny app
custom	Logical (TRUE, FALSE) to indicate if ggplot object (or list of ggplot objects) should be returned. This option can be used to customize plots (e.g., add a title, change x and y labels, etc.). See examples and <a href="http://docs.ggplot2.org/">http://docs.ggplot2.org/</a> for options.
...	further arguments passed to or from other methods

### Details

See [https://radiant-rstats.github.io/docs/multivariate/pre\\_factor.html](https://radiant-rstats.github.io/docs/multivariate/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)
plot(result, plots = c("change", "scree"), cutoff = .05)
```

---

pmap

*Attribute based brand maps*

---

### Description

Attribute based brand maps

### Usage

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

### Arguments

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an <code>r_data</code> list from Radiant
brand	A character variable with brand names
attr	Names of numeric variables
pref	Names of numeric brand preference measures
nr_dim	Number of dimensions
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 <https://radiant-rstats.github.io/docs/multivariate/pmap.html> for an example in Radiant

**Value**

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

**See Also**

[summary.pmap](#) to summarize results

[plot.pmap](#) to plot results

**Examples**

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

---

predict.conjoint	<i>Predict method for the conjoint function</i>
------------------	---

---

**Description**

Predict method for the conjoint function

**Usage**

```
## S3 method for class 'conjoint'
predict(object, pred_data = "", pred_cmd = "",
        conf_lev = 0.95, se = FALSE, dec = 3, ...)
```

**Arguments**

object	Return value from <a href="#">conjoint</a>
pred_data	Name of the dataset to use for prediction
pred_cmd	Command used to generate data for prediction
conf_lev	Confidence level used to estimate confidence intervals (.95 is the default)
se	Logical that indicates if prediction standard errors should be calculated (default = FALSE)
dec	Number of decimals to show
...	further arguments passed to or from other methods

**Details**

See <https://radiant-rstats.github.io/docs/multivariate/conjoint.html> for an example in Radiant

**See Also**

[conjoint](#) to generate the result  
[summary.conjoint](#) to summarize results  
[plot.conjoint](#) to plot results

**Examples**

```
result <- conjoint("mp3", rvar = "Rating", evar = "Memory:Shape")
predict(result, pred_data = "mp3")
```

---

predict\_conjoint\_by     *Predict method for the conjoint function when a by variables is used*

---

**Description**

Predict method for the conjoint function when a by variables is used

**Usage**

```
predict_conjoint_by(object, pfun, pred_data = "", pred_cmd = "",
  conf_lev = 0.95, se = FALSE, dec = 3, ...)
```

**Arguments**

object	Return value from <a href="#">conjoint</a>
pfun	Function to use for prediction
pred_data	Name of the dataset to use for prediction
pred_cmd	Command used to generate data for prediction
conf_lev	Confidence level used to estimate confidence intervals (.95 is the default)
se	Logical that indicates if prediction standard errors should be calculated (default = FALSE)
dec	Number of decimals to show
...	further arguments passed to or from other methods

**Details**

See <https://radiant-rstats.github.io/docs/multivariate/conjoint.html> for an example in Radiant

**See Also**

[conjoint](#) to generate the result  
[summary.conjoint](#) to summarize results  
[plot.conjoint](#) to plot results

---

```
pre_factor
```

---

*Evaluate if data are appropriate for PCA / Factor analysis*

---

### Description

Evaluate if data are appropriate for PCA / Factor analysis

### Usage

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

### Arguments

dataset	Dataset name (string). This can be a dataframe in the global environment or an element in an <code>r_data</code> list from Radiant
vars	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")

### Details

See [https://radiant-rstats.github.io/docs/multivariate/pre\\_factor.html](https://radiant-rstats.github.io/docs/multivariate/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"))
```

---

```
print.conjoint.predict
```

---

*Print method for predict.conjoint*

---

### Description

Print method for predict.conjoint

### Usage

```
## S3 method for class 'conjoint.predict'
print(x, ..., n = 50)
```

**Arguments**

x	Return value from prediction method
...	further arguments passed to or from other methods
n	Number of lines of prediction results to print. Use -1 to print all lines

---

radiant.multivariate	<i>radiant.multivariate</i>
----------------------	-----------------------------

---

**Description**

radiant.multivariate  
Launch Radiant in the default browser

**Usage**

```
radiant.multivariate()
```

**Details**

See <https://radiant-rstats.github.io/docs> for documentation and tutorials

---

radiant.multivariate-deprecated	<i>Deprecated function(s) in the radiant.multivariate package</i>
---------------------------------	---

---

**Description**

These functions are provided for compatibility with previous versions of radiant. They will eventually be removed.

**Usage**

```
save_factors(...)
```

**Arguments**

...	Parameters to be passed to the updated functions
-----	--

**Details**

save\_factors is now a synonym for [store.full\\_factor](#)  
 save\_membership is now a synonym for [store.kclus](#)  
 kmeans\_clus is now a synonym for [kclus](#)  
 hier\_clus is now a synonym for [hclus](#)

---

retailers

*Perceptions of retailers*

---

**Description**

Perceptions of retailers

**Usage**

```
data(retailers)
```

**Format**

A data frame with 6 rows and 10 variables

**Details**

Consumer evaluations for a set of retailers in the Chicago area on 7 attributes. The dataset is used to illustrate perceptual maps. Description provided in `attr(retailers,"description")`

---

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")`

---

store.conjoint	<i>Store method for the Multivariate &gt; Conjoint tab</i>
----------------	--

---

**Description**

Store method for the Multivariate > Conjoint tab

**Usage**

```
## S3 method for class 'conjoint'
store(object, name = "PWs", type = "PW",
      envir = parent.frame(), ...)
```

**Arguments**

object	Return value from conjoint
name	Name of the dataset to store
type	Type of output to store
envir	Environment to assign 'new' dataset (optional). Used when an r_data list is not available
...	further arguments passed to or from other methods

**Details**

Store data frame with PWs or IWs in Radiant r\_data list if available

---

store.conjoint.predict	<i>Store predicted values generated in predict.conjoint</i>
------------------------	---

---

**Description**

Store predicted values generated in predict.conjoint

**Usage**

```
## S3 method for class 'conjoint.predict'
store(object, ..., data = attr(object,
  "pred_data"), name = "prediction")
```

**Arguments**

object	Return value from model predict function
...	Additional arguments
data	Data or dataset name (e.g., data = mtcars or data = "mtcars")
name	Variable name(s) assigned to predicted values

**Details**

See <https://radiant-rstats.github.io/docs/multivariate/conjoint.html> for an example in Radiant

---

```
store.conjoint.predict.by
```

*Store method for the Multivariate > Conjoint > Predict*

---

**Description**

Store method for the Multivariate > Conjoint > Predict

**Usage**

```
## S3 method for class 'conjoint.predict.by'
store(object, name = "predict_by",
      envir = parent.frame(), ...)
```

**Arguments**

object	Return value from predict.conjoint
name	Name of the dataset to store
envir	Environment to assign 'new' dataset (optional). Used when an r_data list is not available
...	further arguments passed to or from other methods

**Details**

Store data frame with predictions in Radiant r\_data list if available

---

```
store.full_factor
```

*Store factor scores to active dataset*

---

**Description**

Store factor scores to active dataset

**Usage**

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

**Arguments**

object	Return value from <a href="#">full_factor</a>
...	Additional arguments
name	Name of factor score variables



**Details**

See [https://radiant-rstats.github.io/docs/multivariate/full\\_factor.html](https://radiant-rstats.github.io/docs/multivariate/full_factor.html) for an example in Radiant

**See Also**

[full\\_factor](#) to generate results  
[summary.full\\_factor](#) to summarize results  
[plot.full\\_factor](#) to plot results

**Examples**

```
full_factor(shopping, "v1:v6", nr_fact = 3) %>%
  store %>%
  head
```

---

store.kclus

---

*Add a cluster membership variable to the active dataset*


---

**Description**

Add a cluster membership variable to the active dataset

**Usage**

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

**Arguments**

object	Return value from <a href="#">kclus</a>
...	Additional arguments
name	Name of cluster membership variable

**Details**

See <https://radiant-rstats.github.io/docs/multivariate/kclus.html> for an example in Radiant

**See Also**

[kclus](#) to generate results  
[summary.kclus](#) to summarize results  
[plot.kclus](#) to plot results

**Examples**

```
kclus(shopping, vars = "v1:v6") %>% store %>% head
```

---

summary.conjoint	<i>Summary method for the conjoint function</i>
------------------	---

---

## Description

Summary method for the conjoint function

## Usage

```
## S3 method for class 'conjoint'
summary(object, show = "", mc_diag = FALSE,
        additional = FALSE, dec = 3, ...)
```

## Arguments

object	Return value from <a href="#">conjoint</a>
show	Level in by variable to analyse (e.g., a specific respondent)
mc_diag	Shows multicollinearity diagnostics.
additional	Show additional regression results
dec	Number of decimals to show
...	further arguments passed to or from other methods

## Details

See <https://radiant-rstats.github.io/docs/multivariate/conjoint.html> for an example in Radiant

## See Also

[conjoint](#) to generate results

[plot.conjoint](#) to plot results

## Examples

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

---

summary.full_factor	<i>Summary method for the full_factor function</i>
---------------------	--

---

## Description

Summary method for the full\_factor function

## Usage

```
## S3 method for class 'full_factor'
summary(object, cutoff = 0, fsort = FALSE, dec = 2,
  ...)
```

## Arguments

object	Return value from <a href="#">full_factor</a>
cutoff	Show only loadings with (absolute) values above cutoff (default = 0)
fsort	Sort factor loadings
dec	Number of decimals to show
...	further arguments passed to or from other methods

## Details

See [https://radiant-rstats.github.io/docs/multivariate/full\\_factor.html](https://radiant-rstats.github.io/docs/multivariate/full_factor.html) for an example in Radiant

## See Also

[full\\_factor](#) to calculate results

[plot.full\\_factor](#) to plot results

## Examples

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

---

summary.hclus	Summary method for the hclus function
---------------	---------------------------------------

---

**Description**

Summary method for the hclus function

**Usage**

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

**Arguments**

object	Return value from <a href="#">hclus</a>
...	further arguments passed to or from other methods

**Details**

See <https://radiant-rstats.github.io/docs/multivariate/hclus.html> for an example in Radiant

**See Also**

[hclus](#) to generate results  
[plot.hclus](#) to plot results

**Examples**

```
result <- hclus("shopping", vars = c("v1:v6"))  
summary(result)
```

---

summary.kclus	Summary method for kclus
---------------	--------------------------

---

**Description**

Summary method for kclus

**Usage**

```
## S3 method for class 'kclus'  
summary(object, dec = 2, ...)
```

**Arguments**

object	Return value from <a href="#">kclus</a>
dec	Number of decimals to show
...	further arguments passed to or from other methods

**Details**

See <https://radiant-rstats.github.io/docs/multivariate/kclus.html> for an example in Radiant

**See Also**

[kclus](#) to generate results

[plot.kclus](#) to plot results

[store.kclus](#) to add cluster membership to the selected dataset

**Examples**

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

summary.mds

*Summary method for the mds function***Description**

Summary method for the mds function

**Usage**

```
## S3 method for class 'mds'
summary(object, dec = 2, ...)
```

**Arguments**

object	Return value from <a href="#">mds</a>
dec	Rounding to use for output (default = 2). +1 used for stress measure
...	further arguments passed to or from other methods

**Details**

See <https://radiant-rstats.github.io/docs/multivariate/mds.html> for an example in Radiant

**See Also**

[mds](#) to calculate results

[plot.mds](#) to plot results

**Examples**

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

---

summary.pmap*Summary method for the pmap function*

---

## Description

Summary method for the pmap function

## Usage

```
## S3 method for class 'pmap'  
summary(object, cutoff = 0, dec = 2, ...)
```

## Arguments

object	Return value from <a href="#">pmap</a>
cutoff	Show only loadings with (absolute) values above cutoff (default = 0)
dec	Rounding to use for output
...	further arguments passed to or from other methods

## Details

See <https://radiant-rstats.github.io/docs/multivariate/pmap.html> for an example in Radiant

## See Also

[pmap](#) to calculate results

[plot.pmap](#) to plot results

## Examples

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

---

summary.pre_factor	<i>Summary method for the pre_factor function</i>
--------------------	---

---

**Description**

Summary method for the pre\_factor function

**Usage**

```
## S3 method for class 'pre_factor'
summary(object, dec = 2, ...)
```

**Arguments**

object	Return value from <code>pre_factor</code>
dec	Rounding to use for output
...	further arguments passed to or from other methods

**Details**

See [https://radiant-rstats.github.io/docs/multivariate/pre\\_factor.html](https://radiant-rstats.github.io/docs/multivariate/pre_factor.html) for an example in Radiant

**See Also**

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

**Examples**

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

---

the_table	<i>Function to calculate the PW and IW table for conjoint</i>
-----------	---

---

**Description**

Function to calculate the PW and IW table for conjoint

**Usage**

```
the_table(model, dat, evar)
```

**Arguments**

<code>model</code>	Tidied model results (broom) output from <code>conjoint</code> passed on by <code>summary.conjoint</code>
<code>dat</code>	Conjoint data
<code>evar</code>	Explanatory variables used in the conjoint regression

**Details**

See <https://radiant-rstats.github.io/docs/multivariate/conjoint.html> for an example in Radiant

**See Also**

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

**Examples**

```
result <- conjoint(dataset = "mp3", rvar = "Rating", evar = "Memory:Shape")
the_table(tidy(result$model_list[[1]][["model"]]), result$dat, result$evar)
```

---

toothpaste	<i>Toothpaste attitudes</i>
------------	-----------------------------

---

**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")`



---

tpbrands	<i>Toothpaste brands</i>
----------	--------------------------

---

**Description**

Toothpaste brands

**Usage**

```
data(tpbrands)
```

**Format**

A data frame with 45 rows and 4 variables

**Details**

Perceived (dis)similarity of a set of toothpaste brands. The dataset is used to illustrate multi-dimensional scaling (MDS). Description provided in `attr(tpbrands,"description")`

# Index

## \*Topic **datasets**

- carpet, [3](#)
- city, [3](#)
- city2, [4](#)
- computer, [5](#)
- movie, [10](#)
- mp3, [10](#)
- retailers, [22](#)
- shopping, [22](#)
- toothpaste, [32](#)
- tpbrands, [33](#)

carpet, [3](#)

city, [3](#)

city2, [4](#)

clean\_loadings, [4](#)

computer, [5](#)

conjoint, [5](#), [11](#), [18](#), [19](#), [26](#), [32](#)

full\_factor, [6](#), [12](#), [24](#), [25](#), [27](#)

hclus, [7](#), [13](#), [21](#), [28](#)

hier\_clus  
(radiant.multivariate-deprecated),  
[21](#)

kclus, [8](#), [14](#), [21](#), [25](#), [28](#), [29](#)

kmeans\_clus  
(radiant.multivariate-deprecated),  
[21](#)

mds, [9](#), [15](#), [29](#)

movie, [10](#)

mp3, [10](#)

plot.conjoint, [6](#), [11](#), [19](#), [26](#), [32](#)

plot.full\_factor, [6](#), [12](#), [12](#), [25](#), [27](#)

plot.hclus, [7](#), [13](#), [28](#)

plot.kclus, [8](#), [14](#), [25](#), [29](#)

plot.mds, [9](#), [15](#), [29](#)

plot.pmap, [15](#), [18](#), [30](#)

plot.pre\_factor, [16](#), [20](#), [31](#)

pmap, [16](#), [17](#), [30](#)

pre\_factor, [16](#), [17](#), [20](#), [31](#)

predict.conjoint, [18](#)

predict\_conjoint\_by, [19](#)

print.conjoint.predict, [20](#)

radiant.multivariate, [21](#)

radiant.multivariate-deprecated, [21](#)

radiant.multivariate-deprecated-package  
(radiant.multivariate-deprecated),  
[21](#)

radiant.multivariate-package  
(radiant.multivariate), [21](#)

retailers, [22](#)

save\_factors  
(radiant.multivariate-deprecated),  
[21](#)

save\_membership  
(radiant.multivariate-deprecated),  
[21](#)

shopping, [22](#)

store.conjoint, [23](#)

store.conjoint.predict, [23](#)

store.conjoint.predict.by, [24](#)

store.full\_factor, [21](#), [24](#)

store.kclus, [8](#), [14](#), [21](#), [25](#), [29](#)

summary.conjoint, [6](#), [11](#), [19](#), [26](#), [32](#)

summary.full\_factor, [6](#), [25](#), [27](#)

summary.hclus, [7](#), [13](#), [28](#)

summary.kclus, [8](#), [14](#), [25](#), [28](#)

summary.mds, [9](#), [15](#), [29](#)

summary.pmap, [16](#), [18](#), [30](#)

summary.pre\_factor, [17](#), [20](#), [31](#)

the\_table, [31](#)

toothpaste, [32](#)

tpbrands, [33](#)