

# Package ‘radiant.multivariate’

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**Type** Package

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

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**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 (>= 3.4.0), radiant.data (>= 1.3.0)

**Imports** radiant.model (>= 1.3.0), shiny (>= 1.4.0), dplyr (>= 0.8.3), rlang (>= 0.4.0), ggplot2 (>= 2.2.1), scales (>= 0.4.0), magrittr (>= 1.5), psych (>= 1.8.4), GPArotation (>= 2014.11-1), car (>= 2.1.1), MASS (>= 7.3), import (>= 1.1.0), ggrepel (>= 0.8), lubridate (>= 1.7.4), polycor (>= 0.7.10), gower (>= 0.2.1), clustMixType (>= 0.2.1), patchwork (>= 1.0.0)

**Suggests** testthat (>= 2.0.0), pkgdown (>= 1.1.0)

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

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

**License** AGPL-3 | file LICENSE

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---

carpet	<i>Carpet cleaners</i>
--------	------------------------

---

**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	<i>City distances</i>
------	-----------------------

---

**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, repl = NA)
```

**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
repl	Replace loadings below the cutoff by NA (or "")

**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(shopping, "v1:v6", nr_fact = 2)
clean_loadings(result$flloadings, fsort = TRUE, cutoff = .5, dec = 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 = "",
  envir = parent.frame()
)
```

**Arguments**

dataset	Dataset
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")
envir	Environment to extract data from

**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**

```
conjoint(mp3, rvar = "Rating", evar = "Memory:Shape") %>% str()
```

---

full\_factor

*Factor analysis (PCA)*

---

**Description**

Factor analysis (PCA)

**Usage**

```
full_factor(  
  dataset,  
  vars,  
  method = "PCA",  
  hcor = FALSE,  
  nr_fact = 1,  
  rotation = "varimax",  
  data_filter = "",  
  envir = parent.frame()  
)
```

**Arguments**

dataset	Dataset
vars	Variables to include in the analysis
method	Factor extraction method to use
hcor	Use polycor::hetcor to calculate the correlation matrix
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")
envir	Environment to extract data from

**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**

```
full_factor(shopping, "v1:v6") %>% str()
```

---

**hclus***Hierarchical cluster analysis*

---

**Description**

Hierarchical cluster analysis

**Usage**

```
hclus(  
  dataset,  
  vars,  
  labels = "none",  
  distance = "sq.euclidian",  
  method = "ward.D",  
  max_cases = 5000,  
  standardize = TRUE,  
  data_filter = "",  
  envir = parent.frame()  
)
```

**Arguments**

dataset	Dataset
vars	Vector of variables to include in the analysis
labels	A vector of labels for the leaves of the tree
distance	Distance
method	Method
max_cases	Maximum number of cases allowed (default is 1000). Set to avoid long-running analysis in the radiant web-interface
standardize	Standardized data (TRUE or FALSE)
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")
envir	Environment to extract data from

**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**

```
hclus(shopping, vars = "v1:v6") %>% str()
```

---

kclus	<i>K-clustering</i>
-------	---------------------

---

**Description**

K-clustering

**Usage**

```
kclus(
  dataset,
  vars,
  fun = "kmeans",
  hc_init = TRUE,
  distance = "sq.euclidian",
  method = "ward.D",
  seed = 1234,
  nr_clus = 2,
  standardize = TRUE,
  lambda = NULL,
  data_filter = "",
  envir = parent.frame()
)
```

**Arguments**

dataset	Dataset
vars	Vector of variables to include in the analysis
fun	Use either "kmeans" or "kproto" for clustering
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 hc_init is FALSE
nr_clus	Number of clusters to extract
standardize	Standardize data (TRUE or FALSE)

lambda	Parameter > 0 to trade off between Euclidean distance of numeric variables and simple matching coefficient between categorical variables. Also a vector of variable specific factors is possible where the order must correspond to the order of the variables in the data. In this case all variables' distances will be multiplied by their corresponding lambda value.
data_filter	Expression entered in, e.g., <code>Data &gt; View</code> to filter the dataset in Radiant. The expression should be a string (e.g., <code>"price &gt; 10000"</code> )
envir	Environment to extract data from

### 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

```
kclus(shopping, c("v1:v6"), nr_clus = 3) %>% str()
```

---

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 = "",
  envir = parent.frame()
)
```

**Arguments**

dataset	Dataset
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")
envir	Environment to extract data from

**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**

```
mds(city, "from", "to", "distance") %>% str()
mds(diamonds, "clarity", "cut", "price") %>% str()
```

---

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	<i>Conjoint data for MP3 players</i>
-----	--------------------------------------

---

**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 analyze (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(mp3, rvar = "Rating", evar = "Memory:Shape")
plot(result, scale_plot = TRUE)
plot(result, plots = "iw")
```

---

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, plots = "attr", shiny = FALSE, custom = FALSE, ...)
```

**Arguments**

x	Return value from <a href="#">full_factor</a>
plots	Include attribute ("attr"), respondents ("resp") or both in 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/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(shopping , "v1:v6", nr_fact = 2)
plot(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)
```

---

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 = "v1:v6", nr_clus = 3)
plot(result)
```

---

plot.mds

*Plot method for the mds function*

---

**Description**

Plot method for the mds function

**Usage**

```
## S3 method for class 'mds'
plot(x, rev_dim = NULL, fontsz = 5, shiny = FALSE, custom = FALSE, ...)
```

**Arguments**

x	Return value from <a href="#">mds</a>
rev_dim	Flip the axes in plots
fontsz	Font size to use in plots
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/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, fontsz = 7)
plot(result, rev_dim = 1:2)
```

---

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(shopping, "v1:v6")
plot(result, plots = c("change", "scree"), cutoff = .05)
```

---

plot.pmap

*Plot method for the pmap function*

---

**Description**

Plot method for the pmap function

**Usage**

```
## S3 method for class 'pmap'
plot(
  x,
  plots = "",
  scaling = 2,
```

```

    fontsz = 5,
    seed = 1234,
    shiny = FALSE,
    custom = FALSE,
    ...
  )

```

### Arguments

x	Return value from <a href="#">prmap</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
seed	Random seed
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/prmap.html> for an example in Radiant

### See Also

[prmap](#) to calculate results  
[summary.prmmap](#) to plot results

### Examples

```

result <- prmap(computer, brand = "brand", attr = "high_end:business")
plot(result, plots = "brand")
plot(result, plots = c("brand", "attr"))
plot(result, scaling = 1, plots = c("brand", "attr"))
prmap(
  retailers, brand = "retailer",
  attr = "good_value:cluttered",
  pref = c("segment1", "segment2")
) %>% plot(plots = c("brand", "attr", "pref"))

```

---

predict.conjoint      *Predict method for the conjoint function*

---

## Description

Predict method for the conjoint function

## Usage

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

## Arguments

object	Return value from <a href="#">conjoint</a>
pred_data	Provide the dataframe to generate predictions. The dataset must contain all columns used in the estimation
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)
interval	Type of interval calculation ("confidence" or "prediction"). Set to "none" if se is FALSE
dec	Number of decimals to show
envir	Environment to extract data from
...	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 = NULL,
  pred_cmd = "",
  conf_lev = 0.95,
  se = FALSE,
  dec = 3,
  envir = parent.frame(),
  ...
)
```

**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
envir	Environment to extract data from
...	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,
  hcor = FALSE,
  data_filter = "",
  envir = parent.frame()
)
```

**Arguments**

dataset	Dataset
vars	Variables to include in the analysis
hcor	Use polycor::hetcor to calculate the correlation matrix
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")
envir	Environment to extract data from

**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**

```
pre_factor(shopping, "v1:v6") %>% str()
```

---

```
print.conjoint.predict
```

*Print method for predict.conjoint*

---

**Description**

Print method for predict.conjoint

**Usage**

```
## S3 method for class 'conjoint.predict'
print(x, ..., n = 20)
```

**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

---

```
prmap
```

*Attribute based brand maps*

---

**Description**

Attribute based brand maps

**Usage**

```
prmap(
  dataset,
  brand,
  attr,
  pref = "",
  nr_dim = 2,
  hcor = FALSE,
  data_filter = "",
  envir = parent.frame()
)
```

**Arguments**

dataset	Dataset
brand	A character variable with brand names
attr	Names of numeric variables
pref	Names of numeric brand preference measures
nr_dim	Number of dimensions
hcor	Use polycor::hetcor to calculate the correlation matrix
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")
envir	Environment to extract data from

**Details**

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

**Value**

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

**See Also**

[summary.prmap](#) to summarize results

[plot.prmap](#) to plot results

**Examples**

```
prmap(computer, brand = "brand", attr = "high_end:business") %>% str()
```

---

`radiant.multivariate` *radiant.multivariate*

---

**Description**

Launch `radiant.multivariate` in the default web browser

**Usage**

```
radiant.multivariate(state, ...)
```

**Arguments**

state	Path to state file to load
...	additional arguments to pass to <code>shiny::runApp</code> (e.g, port = 8080)



**Details**

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

**Examples**

```
## Not run:  
radiant.multivariate()  
  
## End(Not run)
```

---

```
radiant.multivariate_viewer  
  Launch radiant.multivariate in the Rstudio viewer
```

---

**Description**

Launch radiant.multivariate in the Rstudio viewer

**Usage**

```
radiant.multivariate_viewer(state, ...)
```

**Arguments**

state	Path to state file to load
...	additional arguments to pass to shiny::runApp (e.g, port = 8080)

**Details**

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

**Examples**

```
## Not run:  
radiant.multivariate_viewer()  
  
## End(Not run)
```

---

```
radiant.multivariate_window
```

*Launch radiant.multivariate in an Rstudio window*

---

### Description

Launch `radiant.multivariate` in an Rstudio window

### Usage

```
radiant.multivariate_window(state, ...)
```

### Arguments

<code>state</code>	Path to state file to load
<code>...</code>	additional arguments to pass to <code>shiny::runApp</code> (e.g, port = 8080)

### Details

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

### Examples

```
## Not run:  
radiant.multivariate_window()  
  
## End(Not run)
```

---

```
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	<i>Shopping attitudes</i>
----------	---------------------------

---

**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(dataset, object, name, ...)
```

**Arguments**

dataset	Dataset
object	Return value from conjoint
name	Variable name(s) assigned to predicted values
...	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
```

*Store predicted values generated in predict.conjoint*

---

### Description

Store predicted values generated in predict.conjoint

### Usage

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

### Arguments

dataset	Dataset to add predictions to
object	Return value from model predict function
name	Variable name(s) assigned to predicted values
...	Additional arguments

### Details

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

### Examples

```
conjoint(mp3, rvar = "Rating", evar = "Memory:Shape") %>%
  predict(mp3) %>%
  store(mp3, ., name = "pred_pref")
```

---

```
store.full_factor
```

*Store factor scores to active dataset*

---

### Description

Store factor scores to active dataset

### Usage

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

**Arguments**

dataset	Dataset to append to factor scores to
object	Return value from <code>full_factor</code>
name	Name of factor score variables
...	Additional arguments

**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(shopping, .) %>%
  head()
```

---

store.hclus

---

*Add a cluster membership variable to the active dataset*


---

**Description**

Add a cluster membership variable to the active dataset

**Usage**

```
## S3 method for class 'hclus'
store(dataset, object, nr_clus = 2, name = "", ...)
```

**Arguments**

dataset	Dataset to append to cluster membership variable to
object	Return value from <code>hclus</code>
nr_clus	Number of clusters to extract
name	Name of cluster membership variable
...	Additional arguments

### 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

[plot.hclus](#) to plot results

### Examples

```
hclus(shopping, vars = "v1:v6") %>%
  store(shopping, ., nr_clus = 3) %>%
  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(dataset, object, name = "", ...)
```

### Arguments

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

### 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", nr_clus = 3) %>%
  store(shopping, .) %>%
  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 analyze (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)
```

---

summary.full\_factor    *Summary method for the full\_factor function*

---

## Description

Summary method for the full\_factor function

## Usage

```
## S3 method for class 'full_factor'  
summary(object, cutoff = 0, fsort = FALSE, 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(shopping , "v1:v6", nr_fact = 2)  
summary(result)  
summary(result, cutoff = .5, fsort = TRUE)
```



---

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

---

**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	<i>Summary method for kclus</i>
---------------	---------------------------------

---

**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 = "v1:v6", nr_clus = 3)
summary(result)
```

---

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, dec = 1)
```

---

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 <a href="#">pre_factor</a>
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(shopping, "v1:v6")
summary(result)
pre_factor(computer, "high_end:business") %>% 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

<code>object</code>	Return value from <a href="#">pmap</a>
<code>cutoff</code>	Show only loadings with (absolute) values above cutoff (default = 0)
<code>dec</code>	Rounding to use for output
<code>...</code>	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 = "brand", attr = "high_end:business")  
summary(result)  
summary(result, cutoff = .3)  
pmap(  
  computer, brand = "brand", attr = "high_end:dated",  
  pref = c("innovative", "business")  
) %>% summary()
```

---

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, dataset, evar)
```

**Arguments**

model	Tidied model results (broom) output from <a href="#">conjoint</a> passed on by <code>summary.conjoint</code>
dataset	Conjoint data
evar	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(mp3, rvar = "Rating", evar = "Memory:Shape")  
the_table(tidy(result$model_list[[1]][["model"]]), result$dataset, 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

*Toothpaste brands*

---

**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")

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