

# Package: raveclusters (via r-universe)

August 26, 2024

**Type** Package

**Title** Group-level Clustering on 'RAVE' Electrode Signals

**Language** en-US

**Version** 0.1.0.9000

**Description** More about what it does (maybe more than one line) Use four spaces when indenting paragraphs within the Description.

**License** GPL-3

**Encoding** UTF-8

**LazyData** true

**RoxygenNote** 7.2.0

**URL** <https://z94007.github.io/raveclusters>,  
<https://github.com/z94007/raveclusters>

**BugReports** <https://github.com/z94007/raveclusters/issues>

**Imports** shiny (>= 1.2.0), rlang (>= 0.3.0), stringr (>= 1.3.1), yaml (>= 2.2.0), Rtsne (>= 0.15), graphics, ape, magrittr, rave, dipsaus, threeBrain, rutabaga, dendextend (>= 1.15.1), factoextra (>= 1.0.7), dtw (>= 1.22.3), visNetwork (>= 2.1.0), clusterCrit (>= 1.2.8)

**Suggests** devtools, rstudioapi (>= 0.9.0), knitr, rmarkdown

**Remotes** github::dipterix/rutabaga, github::beauchamplab/rave, datastorm-open/visNetwork

**VignetteBuilder** knitr

**Repository** <https://rave-ieeg.r-universe.dev>

**RemoteUrl** <https://github.com/z94007/raveclusters>

**RemoteRef** rave2.0-pipeline

**RemoteSha** 7ada483bab65b6c3593423f6c3dfbf33ea95c7a1

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cluster-index	<i>Calculate clustering index</i>
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### Description

Calculate clustering index

### Usage

```
cluster_index_methods(simplify = TRUE)
```

```
cluster_index(
  x,
  cluster,
  dist,
  dist_args = list(),
  methods = "default",
  check = TRUE
)
```

```
best_criterion(index)
```

```
best_nclusters(index)
```

### Arguments

simplify	whether to return unlisted method names
x	numerical matrix of original data (dimension: sample size times number of variate)
cluster	integer vector or matrix of the clustering results. see 'Details'
dist	distance matrix of x, used by 'silhouette' and 'c_index'. If missing, then the value will be automatically calculated from <a href="#">dist</a> function with additional arguments specified by dist_args
dist_args	see dist

methods	cluster index criterion; a full list can be obtained via <code>cluster_index_methods()</code> . Alternatively, you can specify <code>methods='default'</code> or <code>methods='all'</code> to apply default or all criterion accordingly.
check	see 'Details'
index	the table returned by function <code>cluster_index</code>

### Details

When `cluster` is an integer vector, its length must be equal to the sample size. The observations with the same integer are considered to be in the same cluster. If `cluster` is a matrix, then its row must be consistent with the sample size.

For 'ball\_hall', 'trace\_w', 'trace\_wib', and 'log\_ss\_ratio', `cluster` must be a matrix so `best_criterion` and `best_nclusters` can work properly. In addition, the number of clusters indicated by `cluster` columns must be increasing. The `cluster_index` will check `cluster` by default, which can be disabled by specifying `check=FALSE`

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cluster_mse	<i>Calculate cluster centroid and mean standard error</i>
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### Description

Calculate cluster centroid and mean standard error

### Usage

```
cluster_mse(indata_plot, cluster)
```

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convert_cluster_table	<i>Convert 'RAVE' cluster results into a readable table</i>
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### Description

Convert 'RAVE' cluster results into a readable table

### Usage

```
convert_cluster_table(x, split_by = "A", var = "C", value = "B")
```

### Arguments

x	a list of cluster results
split_by	variable name to be split by; for example, 'Subject'
var	variable name indicating the cluster results; for example, 'Cluster'
value	the name of variable to concatenate into a single string or cell value; for example, 'Electrode'

**Value**

A `data.frame` that is readable

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dev_raveclusters	<i>Function to load all dev funtions and wrap them within an environment</i>
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**Description**

Function to load all dev funtions and wrap them within an environment

**Usage**

```
dev_raveclusters(expose_functions = FALSE, reload = TRUE)
```

**Arguments**

expose_functions	logical indicating whether to expose all dev functions to the global environment
reload	logical, do you want to fast-reload the package before load the functions?

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rave-cluster-data-import	<i>Data import functions used to locate data exported by power explorer module.</i>
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**Description**

Data import functions used to locate data exported by power explorer module.

**Usage**

```
scan_power_explorer_exports(search_paths, pattern = "\\\\.fst$")
find_source(search_paths, fname)
import_configurations(search_paths, file_names)
```

**Arguments**

search_paths	directories to search for data
pattern	search regular expression pattern
fname	character vector of length 1: file name to locate within search_paths
file_names	vector of fname to import

**Value**

potential file names to be loaded

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raveclusters-globals *Global variables used by 'RAVE' clustering module*

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### **Description**

Global variables used by 'RAVE' clustering module

### **Usage**

RAVE\_ROI\_KEY

shiny\_cex.main

### **Format**

An object of class character of length 1.

An object of class numeric of length 1.

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