Package ‘cppcor’

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Type Package

Title Probabilistic Composition of Correlated Preference

Version 1.2

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Description Individual classification method based on multivariate normal distribution, taking into account the correlation between the characteristics observed in the individuals. Entering a data set whose individuals are previously classified, this method will seek to understand how these individuals were grouped into their classes. This package will help you identify the class of new individuals without prior knowledge of your class. The way out is a set of measures that identify these new individuals. An interesting measure is accuracy, which measures how well the method correctly identified an individual for his or her class. The reference of this method was the result of the thesis of Marcelo Carlos Ribeiro, also author of the ‘cppcor’ package, and is still in the phase of corrections for publication. In the next updates of the package, we will add the reference of this method.

Depends R (>= 3.5.0)

Imports gWidgets (>= 0.0-54), gWidgetsRGtk2, foreach, caret, mvtnorm, doParallel, e1071, pacman

SystemRequirements Cairo >= 1.0.0, ATK (>= 1.10.0), Pango (>= 1.10.0), GTK+ (>= 2.8.0), GLib (>= 2.8.0)

NeedsCompilation no

Encoding UTF-8

License GPL (>= 2)

LazyData TRUE

RoxygenNote 7.0.1

Repository CRAN

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cppcor

Probabilistic Composition of Correlated Preference

Description

cppcor function that returns the confusion matrix and parameters of classification analysis

Usage

cppcor(dataset, ID = FALSE, cores = 1)

Arguments

dataset: Data frame object
ID: Logical argument, TRUE or FALSE. The default is FALSE
cores: The number of cores to use for parallel execution. The default is 1.

Details

The dataset argument must be a data frame object, and the last column must be the classes of the evaluated elements. The ID argument must be FALSE if the data are correlated and TRUE if the data are independents.

Value

cppcor return the confusion matrix and parameters of classification analysis

Examples

# Seed
set.seed(10)
c1 <- matrix(rnorm(30, mean = c(70,80,90), sd = 30), 10, 3, byrow = TRUE)
c2 <- matrix(rnorm(45, mean = c(30,40,50), sd = 10), 15, 3, byrow = TRUE)
# Data set
dataset <- as.data.frame(cbind(rbind(c1,c2), c(rep(1, 10), rep(2, 15))))
colnames(dataset) <- c("Var1", "Var2", "Var3", "Class")
# Loading package
library(cppcor)
cppcor(dataset, ID = FALSE)
GUI_cppcor  

**Graphical User Interface for PCCor function**

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**Description**

GUI_cppcor  A Graphical User Interface (GUI) for function that returns the confusion matrix and parameters of classification analysis

**Usage**

GUI_cppcor(gui = TRUE)

**Arguments**

- **gui**  Logical argument, TRUE or FALSE. The default is FALSE

**Value**

GUI_cppcor return a GUI for the confusion matrix and parameters of classification analysis

**Examples**

```r
# Loading package
library(cppcor)
if (interactive()) {
    GUI_cppcor()
}
```
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