Package ‘featureCorMatrix’

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Type Package
Title Measurement Level Independent Feature Correlation Matrix
Version 0.4.0
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Description Uses three different correlation coefficients to calculate measurement-level adequate correlations in a feature matrix: Pearson product-moment correlation coefficient, Intraclass correlation and Cramer’s V.
License GPL (>= 2)
Encoding UTF-8
LazyData true
Imports stats
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cv.test  \hspace{1cm} \textit{Calculates Cramer’s V Correlation Coefficient}

\textbf{Description}

cv.test returns the Cramer’s V correlation coefficient

\textbf{Usage}

cv.test(x, y)

\textbf{Arguments}

\begin{itemize}
  \item \texttt{x} \hspace{1cm} \texttt{a vector (categorical or numerical values)}
  \item \texttt{y} \hspace{1cm} \texttt{a vector (categorical or numerical values)}
\end{itemize}

\textbf{Details}

The function calculates Cramer’s V based on the results of an Chi-Square-Test of Independence between two categorical variables

\textbf{Value}

Cramer’s V

\textbf{Examples}

cv.test(x = iris$Species, iris$Sepal.Length)

\begin{Verbatim}
featureCorMatrix  \hspace{1cm} \textit{Calculates the Feature Correlation Matrix}
\end{Verbatim}

\textbf{Description}

featureCorMatrix returns a correlation matrix between all features

\textbf{Usage}

featureCorMatrix(dataframe, absoluteValues = FALSE)

\textbf{Arguments}

\begin{itemize}
  \item \texttt{dataframe} \hspace{1cm} \texttt{A data.frame}
  \item \texttt{absoluteValues} \hspace{1cm} \texttt{A flag stating if only positive correlations should be returned}
\end{itemize}
Details

The function selects automatically the appropriate correlation coefficient regarding the storage type of both variables - If both variable are numerical ones, the Pearson product-moment correlation coefficient will be chosen - If both variables are categorical, Cramer’s V will be used - If one variable is a numerical and the other a categorical one, the Intraclass correlation will be calculated.

Value

A correlation matrix

Examples

featureCorMatrix(dataframe = iris, absoluteValues = TRUE)

GermanCredit

Statlog (German Credit Data) Data Set

Description

This dataset classifies people described by a set of attributes as good or bad credit risks. The variables are as follows:

- Credit. Target variable
- balance_credit_acc. Status of existing checking account
- duration. Duration in month
- moral. Credit history
- verw. Purpose
- hohe. Credit amount
- sparkont. Savings account/bonds
- beszeit. Present employment since
- rate. Installment rate in percentage of disposable income
- famges. Personal status and sex
- buerge. Other debtors / guarantors
- wohnzeit. Present residence since
- verm. Property
- alter. Age in years
- weitkred. Other installment plans
- wohn. Housing
- bishkred. Number of existing credits at this bank
- beruf. Job
- pers. Number of people being liable to provide maintenance for
- telef. Telephone
- gastarb. Foreign worker
Usage

data(GermanCredit)

Format

A data frame with 1000 rows and 21 variables

Source


icc  Calculates the Intraclass correlation

Description

The function calculates the Intraclass correlation based on the results of the 'aov' function

Usage

icc(depvar, indvar)

Arguments

depvar dependent variable, must be numeric
indvar independent variable, must be categorical

Value

returns the Intraclass correlation

Examples

icc(depvar = iris$Sepal.Length, indvar = iris$Species)
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