Package ‘DescribeDF’

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Type Package
Title Description of a Data Frame
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Description Helps to describe a data frame in hand. Has been developed during PhD work of the maintainer. More information may be obtained from Garai and Paul (2023) <doi:10.1016/j.iswa.2023.200202>.
License GPL-3
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R topics documented:

  df_descstat ................................. 1
  df_nonlinearity ............................. 2
  df_stationarity .............................. 4

Index

<table>
<thead>
<tr>
<th>df_descstat</th>
<th>Descriptive Statistics of A Data Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

Description

Gives descriptive statistics for a data frame (df) excluding the first column. First column mentions different statistics. Other columns are the Statistics values of the particular column (series).

"p_value <= 0.01: ***; p_value <= 0.05: **; p_value <= 0.1: *".
Usage

df_descstat(df)

Arguments

df Data Frame with first column as serial number or date

Value

- desc_df - A table contains 10 descriptive statistics rowwise

References


Examples

```r
# create a vector of dates
dates <- seq(as.Date("2021-01-01"), as.Date("2021-01-05"), by = "day")

# create vectors of random numeric data for columns A through E
A <- runif(5, 0, 1)
B <- runif(5, 0, 1)
C <- runif(5, 0, 1)
D <- runif(5, 0, 1)
E <- runif(5, 0, 1)

# combine the vectors into a data frame
df <- data.frame(Date = dates, A = A, B = B, C = C, D = D, E = E)

# print the data frame
print(df)

# Data Description
df_descstat(df)
```

_df_nonlinearity_ 

Non linearity test of A Data Frame
**df_nonlinearity**

**Description**

Gives non linearity test result for a df excluding the first column (contains serial number or date). This will give a list of data frames. Data frames are named as the names of columns of the data frame. First column mentions different statistics (eps). Other columns are the Statistics values of the particular dimension. "p_value <= 0.01: ***; p_value <= 0.05: **; p_value <= 0.1: *".

**Usage**

`df_nonlinearity(df)`

**Arguments**

- df: Data Frame with first column as serial number or date

**Value**

- result_list - List of data frames named as the column names of provided data frame. Each df is such that first column mentions different statistics and other columns are the Statistics values of the particular dimension.

**References**


**Examples**

```r
# Create a sequence of numbers from 1 to 100
serial <- 1:100

# Create six vectors of random numbers, one for each column
col1 <- rnorm(100)
col2 <- rnorm(100)
col3 <- rnorm(100)
col4 <- rnorm(100)
col5 <- rnorm(100)
col6 <- rnorm(100)

df <- data.frame(serial, col1, col2, col3, col4, col5, col6)
df_nonlinearity(df)
```
df_stationarity 

Description

Gives a list of three data frames: 'ADF', 'PP', 'KPSS'. This will also indicate whether the data is stationary or not according to the null hypothesis of the corresponding tests. The data frame must contain serial number or date or anything in the 1st column. This function will exclude the 1st column of the data frame and will perform tests on other columns. "p_value <= 0.01: ***; p_value <= 0.05: **; p_value <= 0.1: *".

Usage

df_stationarity(df)

Arguments

df 
Data Frame with first column as serial number or date

Value

- test_results - List of three data frames: 'ADF', 'PP', 'KPSS'

References


Examples

# create a vector of dates
dates <- seq(as.Date("2021-01-01"), as.Date("2021-01-05"), by = "day")

# create vectors of random numeric data for columns A through E
A <- runif(5, 0, 1)
B <- runif(5, 0, 1)
C <- runif(5, 0, 1)
D <- runif(5, 0, 1)
E <- runif(5, 0, 1)

# combine the vectors into a data frame
df <- data.frame(Date = dates, A = A, B = B, C = C, D = D, E = E)
# print the data frame
print(df)

# stationarity results
df_stationarity(df)
Index

df_descstat, 1
df_nonlinearity, 2
df_stationarity, 4