

Package ‘DataSum’

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Title Comprehensive Data Summarization for Statistical Analysis

Version 0.1.1

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Description Summarizes data frames by calculating various statistics including central tendency, dispersion, shape, and normality diagnostics. Handles numeric, character, and factor columns with NA-aware computations.

License GPL-3

Encoding UTF-8

RoxygenNote 7.3.3

Imports moments, dplyr, nortest, stats

Suggests testthat (>= 3.0.0)

Config/testthat/edition 3

URL <https://github.com/Uzairkhan11w/DataSum>

BugReports <https://github.com/Uzairkhan11w/DataSum/issues>

NeedsCompilation no

Repository CRAN

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DataSumm	<i>Summarize an Entire Data Frame</i>
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Description

Applies Datum() to each column of a data frame and binds the results.

Usage

```
DataSumm(data)
```

Arguments

data	A data frame (tibble is also ok).
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Value

A data frame, one row per input column.

Examples

```
DataSumm(iris)
```

Datum	<i>Summarize a Single Vector</i>
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Description

Summarizes a single vector by calculating a consistent set of statistics. Numeric vectors include mean/median/variance/sd/min/max/range/skewness/kurtosis and a normality decision. Character/factor vectors report the mode only.

Usage

```
Datum(data)
```

Arguments

data	A numeric, character, factor, or other vector.
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Value

A one-row data.frame with summary statistics.

Examples

```
Datum(rnorm(100))  
Datum(factor(sample(letters[1:3], 20, TRUE)))
```

getmode	<i>Get Mode of a Vector (numeric/character/factor)</i>
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Description

Returns the mode(s) of a vector. By default, returns a single string with all modes collapsed by comma when there are ties. If you need only one mode, set `collapse = FALSE` to return the first mode deterministically.

Usage

```
getmode(x, collapse = TRUE)
```

Arguments

<code>x</code>	A vector (numeric, character, factor, etc.).
<code>collapse</code>	Logical; if TRUE (default), return all modes as a single comma-separated string. If FALSE, return the first mode only.

Value

A single value (first mode) or a comma-separated string of modes.

Examples

```
getmode(c(1, 2, 2, 3, 4))
getmode(c("a", "b", "b", "a"), collapse = TRUE)
getmode(c("a", "b", "b", "a"), collapse = FALSE)
```

shapiro_normality_test	<i>Shapiro/Anderson-Darling Normality Decision</i>
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Description

Performs Shapiro-Wilk for sample sizes between 3 and 5000 (inclusive), otherwise uses Anderson–Darling. Returns "Normal" if $p > 0.05$, else "Not Normal".

Usage

```
shapiro_normality_test(data)
```

Arguments

<code>data</code>	A numeric vector.
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Value

Character scalar: "Normal", "Not Normal", or NA if not applicable.

Examples

```
shapiro_normality_test(rnorm(100))
```

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