Package: seasonalytics (via r-universe)

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Type Package

Title Compute Seasonality Index, Seasonalized and Deseaonalised the Time Series Data

Version 0.1.0

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Description The computation of a seasonal index is a fundamental step in time-series forecasting when the data exhibits seasonality. Specifically, a seasonal index quantifies — for each season (e.g. month, quarter, week) — the relative magnitude of the seasonal effect compared to the overall average level of the series. This package has been developed to compute seasonal index for time series data and it also seasonalise and desesaonalise the time series data.

License GPL-3

Encoding UTF-8

Imports seastests

RoxygenNote 7.3.3

Suggests testthat (>= 3.0.0)

Config/testthat/edition 3

NeedsCompilation no

Repository https://cran.r-universe.dev

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Contents

`deseasonalize` *Deseasonalize a Time Series Given Seasonal Indices*

Description

Deseasonalize a Time Series Given Seasonal Indices

Usage

```
deseasonalize(data, indices, sl, season_labels = NULL)
```

Arguments

`data`	A numeric vector or ‘ts‘ object of original data.
`indices`	A numeric vector (or data.frame column) of seasonal indices of length ‘sl‘.
`sl`	A positive integer giving the seasonal period.
`season_labels`	Optional character vector of length ‘sl‘ giving labels for each season.

Value

A data.frame with columns: Observation (index), Season (label), Original (rounded original data), Deseasonalized (rounded).

Examples

```
data <- as.ts(rnorm(48, mean = 100, sd = 48), frequency = 12)
sl <- 12
si <- SI(data, sl)
deseasonalized <- deseasonalize(data, si$Seasonal_Index, sl)
```

seasonalize *Seasonalize a Deseasonalized Time Series*

Description

Seasonalize a Deseasonalized Time Series

Usage

```
seasonalize(deseasonalized, indices, sl)
```

Arguments

deseasonalized	A numeric vector or 'ts' object of deseasonalized data.
indices	A numeric vector (or data.frame column) of seasonal indices of length 'sl'.
sl	A positive integer giving the seasonal period.

Value

A data.frame with columns: Observation (index), Season (label), Deseasonalized (input), Seasonal_Index (from 'indices'), Seasonalized (output).

Examples

```
data <- as.ts(rnorm(48, mean = 100, sd = 48), frequency = 12)
sl <- 12
si <- SI(data, sl)
deseasonalized <- deseasonalize(data, si$Seasonal_Index, sl)
seasonalized <- seasonalize(deseasonalized$Deseasonalized, si$Seasonal_Index, sl)
```

SI *Seasonal Index for Given Univariate Time Series*

Description

Seasonal Index for Given Univariate Time Series

Usage

```
SI(data, sl)
```

Arguments

data	Univariate Time Series Data
sl	seasonal frequency

Value

error

Examples

```
{
library("seasonalytics")
data<- as.ts(rnorm(48,100,48))
sl<- 12
Result <- SI(data, sl)
}
```

Index