

Package: rjd3stl (via r-universe)

November 22, 2024

Type Package

Title R Interface to 'JDemetra+ 3.x' time series analysis software.

Version 2.1.1

Description R Interface to 'JDemetra+ 3.x'
(<<https://github.com/jdemetra>>) time series analysis software.
It provides functions allowing to decompose a time series,
including high-frequency data with multiple periodicities.

Depends R (>= 4.1.0)

Imports rJava (>= 1.0-6), rjd3toolkit (>= 3.2.2), rjd3highfreq (>= 2.1.0)

Remotes github::rjdverse/rjd3toolkit@*release,
github::rjdverse/rjd3highfreq@*release

SystemRequirements Java (>= 17)

License EUPL

URL <https://github.com/jdemetra/rjd3stl>,
<https://rjdverse.github.io/rjd3stl/>

LazyData TRUE

Suggests knitr, rmarkdown

RoxygenNote 7.3.1

BugReports <https://github.com/rjdverse/rjd3stl/issues>

Encoding UTF-8

Collate 'jd3_stl.R' 'zzz.R'

Repository <https://aqlt.r-universe.dev>

RemoteUrl <https://github.com/rjdverse/rjd3stl>

RemoteRef HEAD

RemoteSha 1ada71192fe3bff0efa7fa3faf87b44e7f2ce875

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istl	<i>Title</i>
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Description

Title

Usage

```
istl(
  y,
  periods,
  multiplicative = TRUE,
  swindows = NULL,
  twindows = NULL,
  ninnerloop = 1,
  nouterloop = 15,
  nojump = FALSE,
  weight.threshold = 0.001,
  weight.function = c("BIWEIGHT", "UNIFORM", "TRIANGULAR", "EPANECHNIKOV", "TRICUBE",
    "TRIWEIGHT")
)
```

Arguments

weight.function

Examples

```
q<-rjd3stl::istl(rjd3toolkit::ABS$X0.2.09.10.M, c(12, 25))
decomp<-q$decomposition
```

loess	<i>Fit a Loess regression.</i>
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Description

Fit a Loess regression.

Usage

```
loess(y, window, degree = 1, jump = 0)
```

Arguments

`y` input time series.
`jump`

Examples

```
q<-rjd3stl::stlplus(rjd3toolkit::ABS$X0.2.09.10.M, 12)
decomp<-q$decomposition
t<-decomp[, 't']
matplot(cbind(t,loess(t, 121)), type='l')
```

mstl	<i>Title</i>
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Description

Title

Usage

```
mstl(
  y,
  periods,
  multiplicative = TRUE,
  swindows = NULL,
  twindow = 0,
  ninnerloop = 1,
  nouterloop = 15,
  nojump = FALSE,
  weight.threshold = 0.001,
  weight.function = c("BIWEIGHT", "UNIFORM", "TRIANGULAR", "EPANECHNIKOV", "TRICUBE",
    "TRIWEIGHT")
)
```

Arguments

weight.function

Examples

```
q<-rjd3stl::mstl(rjd3toolkit::ABS$X0.2.09.10.M, c(12, 25))
decomp<-q$decomposition
```

stlplus

Title

Description

Perform an STL like (based on Loess) decomposition on any periodicity

Usage

```
stlplus(
  y,
  period,
  multiplicative = TRUE,
  swindow = 7,
  twindow = 0,
  lwindow = 0,
  sdegree = 0,
  tdegree = 1,
  ldegree = 1,
  sjump = 0,
  tjump = 0,
  ljump = 0,
  ninnerloop = 1,
  nouterloop = 15,
  weight.threshold = 0.001,
  weight.function = c("BIWEIGHT", "UNIFORM", "TRIANGULAR", "EPANECHNIKOV", "TRICUBE",
    "TRIWEIGHT"),
  legacy = FALSE
)
```

Arguments

y input time series.
 period period, any positive real number.
 multiplicative Boolean indicating if the decomposition mode is multiplicative (TRUE).
 swindow length of the seasonal filter.
 twindow length of the trend filter.

lwindow	length of the filter used to remove the trend of the seasonal
sdegree	degree of the seasonal local polynomial (0 or 1)
tdegree	degree of the trend local polynomial (0 or 1)
ldegree	degree of the low-pass local polynomial (0 or 1)
sjump	number of jumps in the computation of the seasonal
tjump	number of jumps in the computation of the trend
ljump	number of jumps in the computation of the trend in the seasonal
ninnerloop	Number of inner loops
nouterloop	Number of outer loops (computation of robust weights)
weight.threshold	Weights threshold (in [0, 0.3])
weight.function	weights function
legacy	use of the (bugged) legacy MAD

Value

A matrix with the following series: y, sa, t, s, i, fit, weights

Examples

```
q<-rjd3stl::stlplus(rjd3toolkit::ABS$X0.2.09.10.M, 12)
decomp<-q$decomposition
```

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