

Package ‘OBL’

October 12, 2022

Type Package

Title Optimum Block Length

Version 0.2.0

Maintainer Daniel James <futathesis@gmail.com>

Description Obtain optimum block from Non-overlapping Block Bootstrap method.

Depends R (>= 4.2.0)

Imports forecast, foreach, dplyr, forcats, ggplot2, utils, stats,
tibble

License GPL (>= 2)

Encoding UTF-8

RoxygenNote 7.1.2

LazyData true

Suggests knitr, rmarkdown

VignetteBuilder knitr

NeedsCompilation no

Author Daniel James [cre, aut],
Ayinde Kayode [aut]

Repository CRAN

Date/Publication 2022-08-09 05:00:02 UTC

R topics documented:

| | |
|---------------------|---|
| blockboot | 2 |
| ts | 3 |

| | |
|--------------|----------|
| Index | 4 |
|--------------|----------|

| | |
|-----------|---|
| blockboot | <i>OBL: Optimal Block Length Compute Optimal Block Length for Non-overlapping, Overlapping, Circular Block, tapered moving, and tapered circular Block Bootstrap method</i> |
|-----------|---|

Description

OBL: Optimal Block Length

Compute Optimal Block Length for Non-overlapping, Overlapping, Circular Block, tapered moving, and tapered circular Block Bootstrap method

OBL: Optimal Block Length

Compute Optimal Block Length for Non-overlapping, Overlapping, Circular Block, tapered moving, and tapered circular Block Bootstrap method

Usage

```
blockboot(
  ts,
  R,
  seed,
  n_cores,
  methods = c("optnbb", "optmbb", "optcbb", "opttmbb", "opttcbb")
)

lolliblock(
  ts,
  R,
  seed,
  n_cores,
  methods = c("optnbb", "optmbb", "optcbb", "opttmbb", "opttcbb")
)
```

Arguments

| | |
|---------|---|
| ts | univariate time series |
| R | number of resample |
| seed | RNG seed |
| n_cores | number of core(s) to be used on your operaterating system |
| methods | "optnbb", "optmbb", "optcbb", "opttmbb", "opttcbb" |

Value

A data frame get printed to the console

A data frame get printed to the console

Functions

- `blockboot`: package helps to obtain the optimal block length of a time series data
- `lolliblock`: package helps to obtain the optimal block length of a time series data

Examples

```
set.seed(289805)
ts <- arima.sim(n = 3, model = list(ar = 0.8, order = c(1, 0, 0)), sd = 1)
blockboot(ts = ts, R = 2, seed = 6, n_cores = 1)
```

```
set.seed(289805)
ts <- arima.sim(n = 3, model = list(ar = 0.8, order = c(1, 0, 0)), sd = 1)
lolliblock(ts, R = 2, seed = 6, n_cores = 1)
```

| | |
|----|--|
| ts | <i>Ten (10) simulated univariate time series data.</i> |
|----|--|

Description

`arima.sim` returns the sum of all the values present in its arguments.

Usage

```
ts
```

Format

A time series data with 10 rows and 1 variables:

price price, in US dollars

carat weight of the diamond, in carats ...

Details

A dataset containing simulated univariate time series of 10 ts.

Value

It returns a univariate time series data It could be a vector

Source

Simulated data generated with the following code: `set.seed(289805) ts <- stats::arima.sim(n = 10, model = list(ar = 0.8, order = c(1, 0, 0)), sd = 1)`

Examples

```
set.seed(289805)
ts <- stats::arima.sim(n = 10, model = list(ar = 0.8, order = c(1, 0, 0)), sd = 1)
```

Index

* **datasets**

ts, [3](#)

blockboot, [2](#)

lolliblock (blockboot), [2](#)

ts, [3](#)