Package: DPQBootstrap (via r-universe)

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Title Dirichlet Quantile Bootstrap for Time Series

Version 0.1.1

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Description Provides a Dirichlet-based quantile bootstrap method for time series with rank-preserving reconstruction and averaged bootstrap samples. The package generates bootstrap trajectories, a mean bootstrap series, and uncertainty intervals for time series resampling.

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Encoding UTF-8

RoxygenNote 7.3.3

Imports stats, rlang

Suggests ggplot2

NeedsCompilation no

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dpq_bootstrap *DP-Quantile Bootstrap for Time Series*

Description

Generate bootstrap time series using a Dirichlet-based quantile bootstrap with rank-preserving reconstruction.

Usage

```
dpq_bootstrap(x, R = 500, alpha = 1, seed = NULL)
```

Arguments

x	Numeric vector. Original time series.
R	Integer. Number of bootstrap replications.
alpha	Positive numeric. Dirichlet concentration parameter.
seed	Optional seed.

Value

A list containing bootstrap samples, mean series, quantiles and ranks.

Examples

```
x <- c(120, 125, 118, 130, 128, 135, 140, 138, 145, 150)
res <- dpq_bootstrap(x, R = 20, alpha = 1, seed = 123)
res$mean_series
dim(res$samples)
```

plot_dpq *Plot DP-Quantile Bootstrap Result*

Description

Plot DP-Quantile Bootstrap Result

Usage

```
plot_dpq(object, dates = NULL, interval = "50")
```

Arguments

object	Object returned by dpq_bootstrap().
dates	Optional vector of dates.
interval	Character. Either '50' or '95'.

Value

A ggplot object.

Examples

```
x <- c(120, 125, 118, 130, 128, 135, 140, 138, 145, 150)
res <- dpq_bootstrap(x, R = 20, alpha = 1, seed = 123)
if (requireNamespace('ggplot2', quietly = TRUE)) {
  plot_dpq(res, interval = '50')
}
```

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