Package: setartree (via r-universe)

September 17, 2024

Title SETAR-Tree - A Novel and Accurate Tree Algorithm for Global Time Series Forecasting

Version 0.2.1

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Description The implementation of a forecasting-specific tree-based model that is in particular suitable for global time series forecasting, as proposed in Godahewa et al. (2022) <arXiv:2211.08661v1>. The model uses the concept of Self Exciting Threshold Autoregressive (SETAR) models to define the node splits and thus, the model is named SETAR-Tree. The SETAR-Tree uses some time-series-specific splitting and stopping procedures. It trains global pooled regression models in the leaves allowing the models to learn cross-series information. The depth of the tree is controlled by conducting a statistical linearity test as well as measuring the error reduction percentage at each node split. Thus, the SETAR-Tree requires minimal external hyperparameter tuning and provides competitive results under its default configuration. A forest is developed by extending the SETAR-Tree. The SETAR-Forest combines the forecasts provided by a collection of diverse SETAR-Trees during the forecasting process.

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URL https://github.com/rakshitha123/setartree

BugReports https://github.com/rakshitha123/setartree/issues

Depends R (>= 3.5.0)

Imports stats, utils, methods, parallel, generics (>= 0.1.2)

Suggests forecast

Encoding UTF-8

LazyData true

Roxygen list(markdown = TRUE)

RoxygenNote 7.2.3

Repository https://rakshitha123.r-universe.dev

RemoteUrl https://github.com/rakshitha123/setartree

RemoteRef HEAD

RemoteSha 6fdd5d8bf50f1d0f69d5d575dc80eec903c6a240