

# Package: setartree (via r-universe)

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**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

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**Repository** <https://rakshitha123.r-universe.dev>

**RemoteUrl** <https://github.com/rakshitha123/setartree>

**RemoteRef** HEAD

**RemoteSha** 6fdd5d8bf50f1d0f69d5d575dc80eec903c6a240