Package 'ARIMAANN'

October 13, 2022

Type Package

Title Time Series Forecasting using ARIMA-ANN Hybrid Model

Version 0.1.0

Depends R (>= 2.3.1), stats,forecast, tseries

Description
Testing, Implementation, and Forecasting of the ARIMA-ANN hybrid model. The ARIMA-ANN hybrid model combines the distinct strengths of the Auto-Regressive Integrated Moving Average (ARIMA) model and the Artificial Neural Network (ANN) model for time series forecasting.For method details see Zhang, GP (2003) <doi:10.1016/S0925-2312(01)00702-0>.

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NeedsCompilation no

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R topics documented:

`ARIMAANN` *ARIMA-ANN hybrid model fitting*

Description

The ARIMAANN function fit ARIMA-ANN hybrid model for time series data.

Usage

```
ARIMAANN(data,h)
```

Arguments

data	Input univariate time series (ts) data.
h	The forecast horizon.

Details

This package allows you to fit the ARIMA-ANN hybrid model.

Value

Test_Result	Checking the suitability of data for hybrid modelling
ARIMA coefficients	Coefficients of the fitted ARIMA
pvalues	pvalues of the fitted ARIMA model
ANN Summary	Summary of the fitted ANN model on residuals obtained from the fitted ARIMA model
MAPE	Mean Absolute Percentage Error (MAPE) of the fitted hybrid model
MSE	Mean Square Error (MSE) of fitted hybrid model
fitted	Fitted values of hybrid model
forecasted.values	h step ahead forecasted values employing hybrid model

Author(s)

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References

Zhang, G. P.Time series forecasting using a hybrid ARIMA and neural network model Neurocomputing, 50 (2003), pp. 159-175.

See Also

auto.arima, nnetar

Examples

```
data=lynx
ARIMAANN(data,5)
```

Index