

SARIMA versus naive models, forecasting the weather with time series analysis

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Abstract

In this thesis we apply univariate time series analysis on monthly mean weather data. By comparing SARIMA models with a naive approach, we evaluate the forecast performance for the air temperature, wind speed and precipitation in the south of Sweden. To stabilize the variance of the monthly mean wind speed and precipitation we apply Box-Cox transformations on the time series. It is concluded that the SARIMA models have better forecast performance during a 159 months forecast horizon than the naive models.

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