FORECASTING MODEL OF RAINFALL IN MALANG BY USING UNIVARIATE TIME SERIES AND MULTIVARIATE TIME SERIES APPROACH

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ABSTRACT
Multivariate time series model is a model that used to predict the time series data with more than one variable, such as VARIMA and GSTAR. In GSTAR modeling there is weighted location, unlike VARIMA there is no special weighted for location. One of the research can be done with both of these methods is about rainfall. The use of rainfall in multiple locations are considered to be appropriate, because rainfall between locations in Malang is considered mutually influential and heterogeneous. Rainfall data is data dasarian with seasonal patterned 36. The use of forecasting method that have attention with location, expected can capture rainfall patterns with more precise. This research will also compare with univariate time series (ARIMA) forecasting results. Weighted of GSTAR method that used in this research is uniform, binary, invers of distance, and normalization of cross-correlation. Results of the analysis showed that the most accurate predictions is GSTAR with normalization of cross-correlation weighted/

Key words: multivariate, univariate, time series, VARIMA, ARIMA, GSTAR, spatial weighted.
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