# Enhanced Model of Singular Spectrum Analysis in Identifying Temporal Rainfall in Special Region of Yogyakarta Indonesia

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ABSTRACT

Large rainfall data frequently contain noise, which can be difficult to analyze using a standard time series model due to assumptions being violated. Singular spectrum analysis (SSA) is a model-free method of time series analysis that is widely used in applications. The aim of this study is to enhance the model of SSA into Recurrent SSA and Vector SSA in forecasting temporal rainfall patterns in the Special Region of Yogyakarta, Indonesia. The results showed that the Recurrent SSA was performed better than Vector SSA due to the smallest root mean square error in the dry season, rainy season, and intermonsoon for forecasting the rainfall data of the Special Region of Yogyakarta

Kata Kunci: *Singular spectrum analysis, recurrent SSA, vector SSA, rainfall patterns, Yogyakarta*