

RAINFALL FORECASTING USING LOCAL PARAMETERS OVER A METEOROLOGICAL STATION: AN ARTIFICIAL NEURAL NETWORK APPROACH

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Abstract

Rainfall forecasting is very crucial tasks. The rainfall series is chaotic time series and sensitive to initial conditions. The flapping of butterfly wings causing a tropical cyclone. Numerous researcher have introduces number of models for rainfall forecasting. No two model forecast the same situation in exactly same way. On the same time no single model is reliable for rainfall forecasting. Climate and rainfall are highly non-linear phenomena in nature exhibiting what is known as the "butterfly effect". Some regions of the world are noticing a systematic decrease in annual rainfall, others notice increases in flooding and severe storms, some of region noticing shift in annual rainfall period. This paper is an attempt to use of different artificial neural network topologies for rainfall forecasting. The topologies used are radial basis functions and multilayer perceptron with Levenberg Marquardt and momentum learning rules.

Keywords: artificial neural network, radial basis functions, multilayer perceptron, Levenberg Marquardt, momentum