Rainfall intensity forecast using ensemble artificial neural network and data fusion for tropical climate

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ABSTRACT
This paper proposes an ensemble method based on neural network architecture and stacking generalization. The objective is to develop a novel ensemble of Artificial Neural Network models with back propagation network and dynamic Recurrent Neural Network to improve prediction accuracy. Historical meteorological parameters and rainfall intensity have been used for predicting the rainfall intensity forecast. Hourly predicted rainfall intensity forecast are compared and analyzed for all models. The result shows that for 1 h of prediction, the neural network ensemble forecast model returns 94% of precision value. The study achieves that the ensemble neural network model shows significant improvement in prediction performance as compared to the individual neural network model.