



Rainfall Prediction System using PCA and Cultural Algorithm Optimized Neural Network Classifier

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Abstract – Climatic forecasting of the rainfall field is a key aspect of meteorology. Rainfall is a variable associated with natural disasters (droughts and floods) and agricultural crops, with impacts on the tourism and transport sectors. However, this meteorological variable is difficult to predict, due to the great temporal and spatial variability (discontinuous variable). This paper uses Probability Density Function (PDF) followed by the min-max normalization for the pre-processing of the Kaggle Indian Rainfall Dataset. The selection of attributes is achieved by Principal Component Analysis (PCA) followed by the classification using Cultural Algorithm Optimized Neural Network Classifier..

Keywords – Cultural Algorithm, Min-Max Normalization, Neural Network, PCA, PDF, etc.