Weather - Temperature Pattern Prediction and Anomaly Identification using Artificial Neural Network

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Abstract

Temperature prediction is one of the most important and challenging task in today's world. Temperature prediction is the attempt by meteorologists to forecast the state of the atmospheric parameters such as: Temperature, Humidity, etc. The paper presents research on weather forecasting by using historical dataset. Because atmosphere pattern is complex, nonlinear system, traditional methods aren't effective and efficient. Artificial Neural Network is an influential method for resolving such problems. The proposed ANN evaluates the performance of the developed models by applying different neurons, hidden layers and transfer functions to predict temperature for 365 days of the year. The criteria used for appropriate model selection is mean square error (MSE). Contrary to similar researches the data model and workflow suggested in the paper generated lesser MSE (i.e. more accurate results) that too with reduced computational complexity (i.e. better performance).

References


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Index Terms

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Keywords