

نرجس مهدي محسن

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Rainfall prediction using machine learning

Abstract

Predicting rainfall accurately is vital for effective water resource management and agricultural planning. Decision Tree Classifier algorithm stands out as a powerful tool for rainfall prediction due to its ability to analyze complex data patterns and provide interpretable results. Decision trees are advantageous for their simplicity and transparency, allowing farmers and policymakers to understand the decision-making process behind rainfall forecasts easily. By examining historical weather data and other relevant factors, Decision Tree Classifier algorithm can effectively predict rainfall patterns in different regions of Iraq. This study specifically concentrates on using Decision Tree Classifier for rainfall prediction. Such predictions aid in analyzing rainfall patterns, implementing precautionary measures, and disaster management. Additionally, they contribute to formulating policies and strategies to address global issues such as ozone depletion, closely linked to changing rainfall patterns due to global warming. we have a high accuracy to predict the rainfall in the search its 100 % for testing data and training data.