

Crop Yield Prediction using CNN

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Abstract: Deep learning is a branch of Machine Learning which is completely based on artificial neural networks, as neural networks are going to mimic the human brain so deep learning is also a kind of mimic of the human brain. Farming is the main occupation of India. Crop yield has a direct impact on nation and international economies annually and the yield predicted plays a significant part in the food management and agriculture sector. The task is to build a prediction model for crop production. A prerequisite of intelligent systems has brought artificial neural networks to become a new technology which provides assorted solutions for complex problems in agriculture research. Performance of the agriculture sector mainly hinges on natural forces such as spatio-temporal distribution of rainfall, temperature, climate etc, with the result any deviation of monsoon from the normal pattern brings about numerous fluctuations in area and production. Crop yield has a direct impact on nation and international economies annually and the yield predicted plays a significant part in the food management and agriculture sector. The task is to build a prediction model for crop production. The basic principle of ANN architecture, Data Modeling for Prediction involves four stages namely historical data analysis (Descriptive), Data preprocessing, modeling of Data and Performance Estimation. First classify data based on different attributes. Regression analysis using CNN, it observes the relation between an independent (predictor) and dependent (target) variables. Based on relation training the model will predict crop yield production. application of ANN in predicting crop yield by using various crop performance features as input parameter.

Keywords: crop performance