A review on Estimation of Crop yield using different Machine learning approaches in precision agriculture

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Abstract: Precision agriculture is an innovative approach of farming that makes use of data analytics, machine learning (ML) strategies to maximize utilization of resources, boost crop yield prediction, and reduce environmental impact. ML techniques are currently receiving more attention since remote sensing approaches uses large amount of data from different platforms. ML based systems have the ability to perform nonlinear tasks and process a huge number of inputs. In this review work, recent advances in ML based algorithms for precise crop yield prediction are discussed. The research comes to the conclusion that the rapid development in ML approaches will offer complete, cost-effective solutions for improved crop and environment status estimates and decision making. The goal of precision agriculture is to make farming practices more efficient, effective, and sustainable. Precision agriculture leverages ML and interpretable artificial intelligence to revolutionize conventional farming techniques, evolving them into data-centric, effective, and eco-friendly approaches.

Keywords: Crop Yield Prediction, machine Learning, Deep Learning, Deep Leraning, , CNN-Recurrent Neural Networks (RNN), and CNN-Long Short-Term Memory (LSTM), Deep Neural Networks (DNN),