

Crop Yield Prediction

Project-III (IT208TPC31) report submitted to
Guru Ghasidas Vishwavidyalaya
in partial fulfilment for the award of the degree of
Bachelor of Technology
in
Information Technology

by

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30 April 2024

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CERTIFICATE

This is to certify that the project report entitled "Crop Yield Prediction" submitted by Md Asif Altawa - 20107034/GGV/20/01434, Md Abid Hussain-20107033/GGV/20/01433, Mradul - 20107038/GGV/20/01438 to Guru Ghasidas Vishwavidyalaya towards partial fulfilment of requirements for the award of degree of Bachelor of Technology in Information Technology is a record of bonafide work carried out by him under my supervision and guidance during .

HEAD

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Abstract

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Degree for which submitted: **Bachelor of Technology**

Department: **Department of Information Technology**

Thesis title: **Crop Yield Prediction**

Thesis supervisor: **Dr Ankit Kumar**

Month and year of thesis submission: **30 April 2024**

Crop yield prediction is crucial for ensuring food security and optimizing agricultural practices. Traditional methods rely on historical data and manual observations, which can be time-consuming and error-prone. Machine learning (ML) techniques offer a promising approach to improve the accuracy and efficiency of crop yield prediction. This paper presents a comprehensive review of ML-based models used for crop yield prediction, focusing on decision tree regression models. We discuss the advantages of using decision tree regression, such as interpretability and ease of implementation, and compare them with other ML algorithms. Furthermore, we highlight recent advancements and challenges in crop yield prediction using ML, including data availability, model complexity, and scalability. Finally, we provide insights into future research directions to enhance the effectiveness of ML in predicting crop yields.