A Project Report

On

CROP YEILD PREDICTION USING MACHINE LEARNING

Submitted to

VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELGAUM, KARNATAKA- 590014

In partial fulfilment of the completion of Eighth semester

Bachelor of Engineering

in

Information Science and Engineering

By

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CERTIFICATE

This is to certify that the project entitled **"Crop yield prediction using machine learning"** has been successfully completed by

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the bonafide students OF **DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING**, **Alva's Institute of Engineering and Technology**, Moodbidri affiliated to **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the academic year 2020–21. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed in partial fulfillment of awarding Bachelor of Engineering degree.

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CHAPTER 1
INTRODUCTION

Agriculture is the backbone of every economy. In a country like India, which has ever increasing demand of food due to rising population, advances in agriculture sector are required to meet the needs. From ancient period, agriculture is considered as the main and the foremost culture practiced in India. Ancient people cultivate the crops in their own land and so they have been accommodated to their needs.

Machine learning can bring a great impact of profit in the agriculture field by implementing the technology. The prediction made by machine learning algorithms will help the farmers to decide which crop to grow to get the maximum yield.

Growth of agriculture depends on diverse soil parameters, crop rotation, surface temperature and also weather aspects which include temperature, rainfall, humidity etc. From past ten years of India have been considered making this dataset to ensure learning and training of the algorithm and increasing the accuracy rate of the prediction.

Crop yield prediction is an important agricultural problem. Each and Every farmer is always tries to know, how much yield will get from his expectation. In the past, yield prediction was calculated by analyzing farmer's previous experience on a particular crop. The Agricultural yield is primarily depends on weather conditions, pests and planning of harvest operation. Accurate information about history of crop yield is an important thing for making decisions related to agricultural risk management. The farmer will check the yield of the crop as per the acre , before cultivating onto the field.

1.1 WORKING DOMAIN: MACHINE LEARNING

Machine learning (ML) is the scientific study of algorithms and statistical models that computer systems use to perform a specific task without using explicit instructions, relying on patterns and inference instead. It is seen as a subset of artificial intelligence. Machine learning algorithms build a mathematical model based on sample data, known as "training data", in order to make predictions or decisions without being explicitly programmed to perform the task. Machine learning algorithms are used in a wide variety of applications, such as email filtering and computer vision, where it is difficult or infeasible to develop a conventional algorithm for