VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

A PROJECT REPORT ON

"CROP DISEASE PREDICTION USING AI AND DEEP LEARNING TO SUPPORT SMART FARMING"

Submitted in partial fulfillment for the award of Degree of,

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE &ENGINEERING

By

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ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

CERTIFICATE

This is to certify that the project entitled **"CROP DISEASE PREDICTION USING AI AND DEEP LEARNING TO SUPPORT SMART FARMING"** has been successfully completed by

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the bonafide students of **DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING, ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2019–2020. 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 for the Bachelor of Engineering Degree.

Dr.Manjunath Kotari	**Dr. Manjunath Kotari**	**Dr. Peter Fernandes**
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ABSTRACT

The Advantage of Machine Learning is Possible to predict the result by analyzing the previous data or results. We intend to develop an android or web based intelligent module plant disease predicting and simultaneously providing precaution's since this has become a necessary tool. Convolutional neural network models were developed to perform plant disease detection and diagnosis using simple leaves images of healthy and diseased plants, through deep learning methodologies. Training of the models was performed with the use of an open database of images, containing different plants in a set of distinct classes of [plant, disease] combinations, including healthy plants. Several model architectures were trained, with the best performance reaching a 90% success rate in identifying the corresponding [plant, disease] combination (or healthy plant). The significantly high success rate makes the model a very useful advisory or early warning tool, and an approach that could be further expanded to support an integrated plant disease identification system to operate in real cultivation condition the analysis and prediction is based on convolutional neural network using Google's Open Source Tensor Flow library. Recent studies have reflected that machine learning and deep learning techniques achieved better performance than traditional statistical methods. Machine learning, a branch of artificial intelligence has been proved to be a robust method in predicting and analyzing a given data set. The module plays a vital role in agricultural, industrial and logistical fields where the food production is an important criterion.