

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

“Jnana Sangama” Belagavi – 590 010



PROJECT REPORT ON

**“DETECTION OF UNHEALTHY REGION OF PLANT
LEAVES”**

Submitted in partial fulfillment of the requirements for the award of degree

**BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING**

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225.

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CERTIFICATE

Certified that the project work entitled "DETECTION OF UNHEALTHY REGION OF PLANT LEAVES" is a bonafide work carried out by

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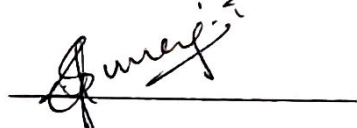
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in partial fulfillment for the award of BACHELOR OF ENGINEERING in ELECTRONICS & COMMUNICATION ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI during the year 2016-2017. It is certified that all corrections/suggestions indicated 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.



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ABSTRACT

Plant leaf diseases have turned into a dilemma as it can cause significant reduction in both quality and quantity of agricultural products. The naked eye observation of farmers followed by chemical test is the main way of detection and classification of agricultural plant diseases. Farming land may be large for the farmers and they cannot observe each and every plant, every day. Farmers are unaware of non-native diseases and consultation of experts for this might be time consuming and costly. Also unnecessary use of pesticides might be dangerous for natural resources such as water, soil, air, food chain etc. It is expected that there need to be less contamination of food products with pesticides.

Automatic detection of plant leaf diseases is an essential topic as it may prove benefits in monitoring large fields of crops and thus automatically detect the symptoms of diseases as soon as they appear on plant leaves. The proposed system is a software solution for automatic detection and classification of plant leaf diseases. The first step is to capture images using cameras or scanners, these images are made to undergo pre-processing steps like filtering and segmentation. Then different texture and color features are extracted from the processed image. Finally, the feature values are fed as input to the Support Vector Machine (SVM) classifier to classify the given image. The result will be sent to respective person or farmer using GSM via SMS.

Some of the challenges in the method of automatic detection of plant leaf diseases are effect of background data in the resulting image, optimization of the technique for a specific plant leaf diseases and automation of the technique for continuous automated monitoring of plant leaf diseases under real world field conditions. All the disease cannot be identified using single method. The future work is to develop a method for processing an image which is acquired with different background and for developing an android app.