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SHIRODA, GOA – 403 103

DEPARTMENT OF INFORMATION TECHNOLOGY

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"DETECTION OF FLORAL LEAF AFFLICTION USING IMAGE PROCESSING TECHNIQUES"

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CERTIFICATE

This is to certify that this dissertation entitled

"DETECTION OF FLORAL LEAF AFFLICTION USING IMAGE PROCESSING TECHNIQUES"

Submitted in partial fulfillment of the requirements for Bachelor's Degree in Information Technology of Goa University is the bonafide work of

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in partial fulfillment of the requirements of the Bachelor's Degree in Information Technology of Goa University is evaluated and found satisfactory.

DATE: _____ **EXAMINER 1: _____**

PLACE: _____ **EXAMINER 2: _____**

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ABSTRACT

Diseases in plants cause reduction in quality as well as quantity of agricultural products. Plants are prone to various diseases which may be caused by environmental conditions, bacteria, light, fungus, etc. These diseases have some physical characteristics on the leaves, stems, and fruit, such as changes in natural appearance, spot, size, etc. Due to pattern similarity, distinguishing and identifying category of plant disease is the most challenging task. Therefore, efficient mechanisms should be discovered so that accurate identification and prevention can be performed to avoid losses of the entire plant. Diagnosing floral leaf diseases in an accurate and timely way is of the utmost importance.

This project provides a solution for detecting floral leaf affliction using image processing techniques together with feature extraction process, neural network model and classification method. The dataset of the plant leaf images are trained in python tool and classified into various clusters which classifies various labels. Convolution Neural Networks is designed for accurate analysis. Based on the feature extraction parameters, the algorithm predicts whether the leaf is healthy leaf or diseased one. The outcome of the proposed study justifies the scope of the proposed system in terms of accuracy towards the classification of different kinds of plant leaf diseases.

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ABBREVIATIONS

SVM	SUPPORT VECTOR MACHINE
CNN	CONVOLUTIONAL NEURAL NETWORK
NBC	NAIVE BAYES CLASSIFIERS
ANN	ARTIFICIAL NEURAL NETWORK
PCA	PRINCIPAL COMPONENT ANALYSIS
GLCM	GRAY-LEVEL CO-OCCURRENCE MATRIX