

# **PLANT DISEASE IDENTIFICATION USING BAG OF VISUAL WORDS**

**A PROJECT REPORT**

*Submitted by*

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**in partial fulfillment for the award of the degree**

**of**

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### **BONAFIDE CERTIFICATE**

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## DECLARATION

We hereby declare that the work entitled **“PLANT LEAF DISEASE IDENTIFICATION USING BAG OF VISUAL WORDS”** is submitted in partial fulfillment of the requirement for the award of the degree in B.E, in University College of Engineering, BIT Campus, Anna University, Tiruchirappalli. It is the record of our own work carried out during the academic year 2017 – 2018 under the supervision and guidance of **DR.D.ASIR ANTONY GNANA SINGH**, Teaching Fellow, Department of Information Technology, University College of Engineering, BIT Campus, Anna University, Tiruchirappalli. The extent and source of information are derived from the existing literature and have been indicated through the dissertation at the appropriate places.

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## **ABSTRACT**

Plants are important to human life. In this field plant disease identification is more important one. it can be prevent early that would be more to helpful to farmers. In this project, we work together to identify the disease of the plant by using leaves symptoms. The plant provides the following basis: food, fuel (coal, fuel as well as wood), drink, shelter, building material, medicine etc. There are number of disease are affecting the plant growth. Infectious plant disease are caused by pathogens living micro organisms that affect a plant and deprive of it nutrients. Bacteria, fungi, nematodes, viruses are living agents that cause plant. That will affect plant growth. This paper proposed a computer vision system to track plant disease in the field using Bag of visual words by image processing. Use the computer vision system toolbox function for image category classification by creating a bag of visual words. The process generates a histogram of visual word occurrences that represents an image. These histograms are used to train an image category classifier.

In view this, normal and diseased leaf image are acquired to create knowledge base where set of images are captured extracted the feature from the captured image category set by using Bag of feature. These processes create the model for identification of disease. This process is classify the leaf image.

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### LIST OF ABBREVIATIONS

BOW s	Bag of visual words
SURF	Speeded up robust feature
SVM	Support vector machine

TPR	True positive rate
TNR	True negative rate
FOR	False omission rate
FDR	False discovery rate
ANN	Artificial Neural Network

