

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY  
BELGAUM - 590 010, KARNATAKA**



**PROJECT REPORT**

ON

**“PADDY GRADER AND DISEASE FINDER THROUGH  
LEAF COLORATION BY IMAGE PROCESSING”**

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

**BACHELOR OF ENGINEERING  
IN  
INFORMATION SCIENCE & ENGINEERING**

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**2013-2014**

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## ABSTRACT

Paddy (Rice) Plant diseases problem can cause significant reduction in both quality and quantity of agricultural products. Automatic detection of plant leaf diseases and its nitrogen deficiency is an essential research topic as it may prove benefits in monitoring large fields of crops, and thus automatically suggest the immediate action and fertilizers required. The proposed system is a software solution for automatic detection and computation of paddy leaf diseases and nitrogen content. The developed processing scheme consists of two flows:

The first flow deals with the technology that can automatically detect the quality of paddy by the nitrogen present in the paddy leaf using image processing and suggest appropriate fertilizers that could improve the yield.

The second flow has five main steps to find leaf diseases in plant: first a color transformation from input RGB image to grey scale image is created, then the noise i.e. unnecessary part is removed using specific algorithm, then the image is segmented with connected component labeling and the useful segments are extracted, finally the ANN classification is computed by giving different features i.e. size, color, proximity and average centroid distance.