

RICE CROPS NUTRIENT DEFICIENCY AND DISEASE INCIDENCE
MONITORING SYSTEM USING IMAGE ANALYSIS

A Capstone Project
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ABSTRACT

The study is designed to develop a Rice Crops Nutrient Deficiency and Disease Incidence Monitoring System Using Image Analysis. It is developed to provide a more reliable, convenient, efficient, and effective monitoring of nutrient deficiency and disease incidence of rice crops to agriculturists and farmers.

The system can reduce the workload of the agriculturist and farmers in analysing rice crops. The system can provide detailed information about the nutrient deficiency and disease incidence and can measure the rice field and estimate the fertilizer or pesticides needed and can save the diagnosis report for future review. The diagnosis reports saved can be viewed easily for the review of the users.

The agriculturist and farmers will use a drone as a device to capture a top view image of the rice field and then upload it on the system to analyse its nutrient deficiency and disease incidence. After the system has been analysed, the users will decide and diagnose with the provided nutrient deficiency and disease incidence by the system and provide additional information later on for the final diagnosis that can be saved and viewed for later review.

Iterative method was used as a methodology of this study wherein the researchers developed the system. In using the Iterative method, the researchers continued developing the system while doing field study to the rice fields and making all adjustments and changes where the users will be satisfied on the process.

The system provided easier diagnosis of rice crops for both the agriculturist and farmers.