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**Deep Learning Approach to Detect Paddy Crop Disease with
Image Processing**

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Abstract

In the farming sector, there is a great need for automated rice crop disease detection and analysis. It can be used to reduce yield losses, increase treatment effectiveness, prevent the wastage of money and other resources, and produce healthier agricultural production. An automated method for correctly identifying and categorizing diseases from a provided image was suggested. In Sri Lanka and across the globe, paddy plant diseases have gotten very bad. This harms paddy cultivation by reducing the quantity and quality of paddy. The traditional and historic method of treating and identifying diseases in paddy plants is based on direct observation. Identification by eye alone is not a good strategy because it takes time and requires knowledge. And the lack of professional access is the fundamental cause.

The author has chosen to create a convolutional neural network (CNN) followed by a residual architecture to detect paddy plant leaf diseases. Following identification, a preventive solution is suggested that can help those who work in agriculture and organizations manage these diseases in an effective manner.

Keywords: Deep learning, paddy disease detection