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**Abstract**

*Rice plant disease is one of the causes of crop failure, by identifying the types of diseases in rice plants, it can reduce the potential for crop failure. So in this study created a system that can identify the types of diseases in rice plants based on the image of the leaves of rice plants. Classification was carried out in three classes namely Brown Spot, Leaf Blast, and Leaf Folder, using a dataset of 110 leaf images for each class, so that a total dataset of 330 images of rice leaf leaves. The system built using the method for feature extraction used in this study is the Pyramid Histogram of Oriented Gradient method (PHOG and the feature vector is classified with Support Vector Machine (SVM). The results of this study are that this system has the best performance on the PHOG level parameters 1 and Polynomial SVM with feature vectors obtained from the RGB color space combined with the YCbCr color space with result Accuracy 94.8%.*

**Keywords: rice plants, diseases, brown spots, leaf blasts, leaf folders, PHOG, SVM**

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