

Abstract

The fundamental aim of this research is to develop an efficient systems approach to the problem of recognizing diseases in plants. In recent years, computer vision and machine learning approaches and techniques have attracted much interest to categorize various leaf diseases due to their higher computational capabilities and precision. The model built to classify bitter gourd in this study is the ResNet50 architecture. There are several stages in classifying in this study, namely image processing, augmentation, feature extraction and the last one is classification. In this study there were three categories for 1982 images of bitter gourd leaves: healthy leaves, fusarium wilt leaves, and mosaic virus leaves. Accuracy results using adam optimization are 94%, optimization SGD 89%, and optimization RMSprop 96%.

Keywords: *Leaf of bitter gourd, image processing, classification, ResNet50*
