## *ABSTRACT*

*Diseases on cotton leaves are one of the problems that often occur in the cotton industry which can be found in cotton plantations, these diseases on cotton leaves can interfere with productivity in the cotton plant industry. So far, it is very difficult for the human eye to detect the type of disease found in cotton leaves. Bacterial blight, curl virus, fussarium wilt are diseases that are often found on cotton leaves. In this study, a deep learning-based system was designed, namely the Convolutional Neural Network (CNN) which aims to assist farmers in classifying diseases on cotton leaves, this method is run through the Google Colab application. The dataset used in this study is an image of cotton leaves which are divided into four classes, namely Bacterial blight, curl virus, fussarium wilt, and healthy leaves. The steps taken are by collecting cotton leaf datasets, pre-processing, and model training which then the images will be classified. The results of the accuracy achieved in this study amounted to 94.74%.*



***Keywords*****:** *Cotton leaf, Convolutional Neural Network, classification, bacterial blight, curl virus, fussarium wilt.*