

## ABSTRACT

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DEEP LEARNING IMPLEMENTATION TO CLASSIFY ORCHIDS TYPE  
USING CONVOLUTIONAL NEURAL NETWORK METHOD

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Keywords : *Convolutional Neural Network, Deep Learning, Identify, Orchids*

(xi + 65 + Appendices)

*This research designed an image recognition application system for orchids that can recognize various types of orchids. The application can assist the government in introducing orchids to the public. This system was designed using the Deep Learning (DL) method. This web-based application can identify uploaded images of orchids by implementing deep learning using the Convolutional Neural Network (CNN) method for 20 types of orchids. The CNN architectural model used is VGG16. This application was designed using a flowchart and navigation structure. The source of the orchid dataset comes from the Kaggle page and google image, by training the dataset of 20 categories and 3,252 images. Data training was carried out at Google Collaboratory using the Python programming language and website applications were made using the Flask library. The accuracy obtained after conducting the training process at the Collaboratory resulted in a training accuracy value of 97.02% and a validation accuracy of 91.06%. Nevertheless, the accuracy of the test on the android application on 100 images is 92%. This accuracy means that the Convolutional Neural Network model that has been made can identify images correctly and appropriately.*

(References 2016-2021)