

ABSTRACT

Sundanese script is a set of characters used by the Sundanese people to write words in the Sundanese language. Sundanese script consists of various types of characters, including special characters, rarangkèn, pairs, aksara ngalagena, and aksara swara. In today's era, many teenagers find learning Sundanese script challenging due to its unique and complex forms. Therefore, an approach is needed to address this issue. One method used to tackle this problem is by recognizing images using Convolutional Neural Network (CNN) methods.

In this Final Project research, EfficientNet is proposed as the chosen architecture for the Convolutional Neural Network (CNN). EfficientNet is a CNN architecture that uniformly scales all dimensions of depth, width, and resolution in images using a predefined set of scaling coefficients. The dataset used in this Final Project is derived from an e-book titled "Direktori Aksara Sunda untuk Unicode" compiled by Idin Baidillah et al., with a total of 5780 images in .jpg format.

The images will be classified into 18 classes, which are samples of Sundanese scripts used in the research. The parameters used in this research include accuracy, loss, recall, precision, and F1score. The best testing results were obtained using the Adam optimizer, batch size of 64, learning rate of 0.001, and 100 epochs, achieving an accuracy rate of 91.8%, a loss of 0.344, recall of 91.5%, precision of 91.8%, and F1score of 91.6%.

Keywords: Sundanese script, digital image, CNN, EfficientNet.