

ABSTRACT

Facial skin is one of the most important parts of the human body. Many people do various kinds of treatments to make facial skin looks perfect. Different types of facial skin causes many people make mistakes in purchasing skincare products. So that the treatment carried out causes many problems in the facial skin such as acne, wrinkles, and blkc spots. Therefore the author will conduct research on the classification system of skin types. The skin types studied in this study are normal, dry, oily, and combination skin types.

This final project designs the classification of skin types using the implementation of the Conventional Neural Network (CNN) method. The architecture that the author uses is Efficient Net-B0. Efficient Net-B0 is a new method that scales all dimensions of depth, width and resolution in a simple but effective way. This architecture is an improvement over MobileNet and Restnet.

In this study, there are 5 test scenarios which obtain the best scenario for classifying skin types using CNN Efficient Net-B0. The data that the author uses are 1550 data consisting of 1240 (80%) training data and 310 (20%) test data. The best scenario that I got in this research is to use size 64x64 pixels, optimizer Adam, learning rate 0.0001, epoch 50 and dropout 0.3. The results of the scenarios used is the system can classify facial skin types with 100% accuracy, 0,001 loss, 100% precision, 100% recall, and 100% f1-score.

Keyword : *Facial skin type, skin classification, CNN, EfficientNet-B0, face.*