

ABSTRACT

A skin is the outermost part of the human body, so the skin is susceptible to diseases, one of which is skin cancer. Skin cancer is one of the most deadly cancers. Skin cancer ranks third after cervical cancer and breast cancer in Indonesia. In detecting skin cancer, a dermatologist can perform a biopsy. However, the drawbacks of performing a biopsy are that it requires a long time and preparation. Innovations in classifying and detecting skin cancer using artificial neural networks are growing rapidly in helping doctors so that prompt and appropriate treatment can be carried out.

This final project aims to create a system that can classify skin cancer. The dataset used in this study was obtained online through kaggle.com with 3297 RGB image data in which there are two classes, namely malignant skin cancer and benign skin cancer which are divided into 80% training data and 20% test data.

In this study, an image processing system was created, and it can classify skin cancer into two classes, namely malignant and benign using the Convolutional Neural Network (CNN) model and ResNet50 architecture. Based on the results of testing the best hyperparameter system obtained using the AdaMax optimizer, the learning rate is 0.0001, the batch size is 64 and the epoch is 50. The accuracy performance results are 99%, the precision value is 99%, the recall value is 99%, and the f1-score value is 99%.

Keywords : *Convolutional Neural Network (CNN), ResNet50, Skin Cancer.*