

ABSTRACT

Breast cancer is one of the non-communicable diseases that tends to increase every year. This disease occurs almost entirely in women, but can also occur in men. One way to detect this disease is by observing mammography images. However, mammography images often tend to be blurry with low quality so that it is possible to detect errors. Therefore, in this study, automatic classification of breast cancer on mammographic images was carried out using the Convolutional Neural Network (CNN). This proposed system uses the VGG16 architecture with a transfer learning system. The proposed system is then optimized using Adam optimizers and RMSprop optimizers. The results of system testing for normal, benign, and malignant classifications obtained an accuracy value of 80% - 90% with the highest accuracy achieved using Adam's optimizers.

Keywords : *Convolutional Neural Network, VGG16, Classification, Breast Cancer, Mammography Imagery, Transfer learning, Optimizers*