

ABSTRACT

The eye is a sensory device in humans that serves as an organ of vision. A very alarming visual impairment is a problem of blindness. Referring to data from riskesdas Kemenkes RI in 2013, the most cause of blindness in Indonesia is cataracts. With the development of technology, cataract detection and classification becomes easier with the processing of digital imagery.

In this final task is used a system capable of classifying cataracts using the Convolutional Neural Network (CNN). Data is processed through several stages. The imagery data used in this study is three classes of diseases in cataract disease, namely normal, matur, and imatur with each class consisting of 100 image data.

Parameters of hidden layer, optimizer and learning rate affect system performance results in the form of accuracy, precision, recall, and f1 score. In this study obtained the best results, namely with the use of 4 hidden layers, adam optimizer and learning rate 0.001 with system performance for accuracy, precision, recall, and f1-score of 99%, 99%, 99%, and 99% respectively.

Keywords : Katarak, Convolutional Neural Network, Citra Digital