ABSTRACT

Advances in information technology have a major influence on the development of human life. This can have a positive impact and a negative impact on people's behavior in utilizing technology. Money is an item that is very much needed as a transaction tool that can be in the form of a metal chip or a piece of paper and has a different nominal, but over time, people in Indonesia are still worried about the circulating fake rupiah currency, this triggers criminal acts by people. irresponsible. This study was made to assist the public in distinguishing between genuine and counterfeit rupiah currencies when transacting. The method used in this study is Deep learning with the Convolutional Neural Network algorithm and the model used is very commonly found, namely the sequential model. CNN is a type of neural network that is commonly used in the image data processing. This study uses the CNN algorithm because this algorithm is good for classifying images and objects. The images used in this study were 802 images where the image consisted of 4 classes, namely, Rp. 2,000 genuine, Rp. 2,000 fake, Rp. 5,000 genuine, and Rp 5,000 fake. This model uses a learning rate parameter of 0.0001, a 3x3 kernel, and 3 iterations, namely 20 epochs, 25 epochs, and 30 epochs. In the third iteration test, the model gets an accuracy of 100%, this test uses the second iteration with 25 epochs because the average accuracy is greater than the other 2 iterations. The number of images tested was 80 images, the average results were 100% accurate.

Keywords: Classification, Money, CNN, Deep learning, epoch,