ABSTRACT

Wayang kulit is the one of Indonesia's cultural heritages that is rich in philosophical and historical values. Currently, public interest in wayang kulit, especially Punakawan, is decreasing due to cultural changes and reduced promotion in the digital era. Based on these problems, a classification model for Punakawan shadow puppet images was developed using a combination of Gray-Level Co-Occurrence Matrix (GLCM) and Convolutional Neural Network (CNN) texture features based on MobileNetV2. GLCM can extract texture features from an image, while CNN extracts spatial features from an image. The two methods are combined through a concatenate into a hybrid model to build a classification model that is expected to improve the accuracy of the model. The dataset consists of 400 images with a total of 4 classes, namely Bagong, Gareng, Petruk, and Semar. The model was trained with parameters of 100 epochs, batch size 32, and learning rate 1e-4. The analysis results show that the hybrid model produces an accuracy of 98.75%.

Keywords: Wayang kulit, GLCM, CNN, MobileNetV2, Classification