

ABSTRACT

Intelligent Transport System (ITS) is a set of technologies used to improve the efficiency, safety and quality of transportation services. The most important subsystem of an ITS is Automatic Number Plate Recognition (ANPR). Automatic Number Plate Recognition (ANPR) is an intelligent system that can recognize characters on vehicle number plates. Research on character recognition on vehicle license plates starts from detecting the location of the number plate to character recognition on the number plate. The system proposed in this study is to recognize Indonesian license plate characters with deep learning using CNN MobileNetV2. The system's character recognition process starts from detecting Indonesian plates and character segmentation to character recognition. In this study, the overall accuracy rate reached 90% of the 198 images successfully detected by the plates. While the character accuracy using the MobileNetV2 model with 40 epochs reached 98.97% for training and 98.32% for validation. Meanwhile, from the 198 images that were successfully detected, there were 1.507 characters. Of the 1.507 characters, 1.425 characters were successfully segmented, meaning that it has an accuracy value of 94%. Then from 1.425 successfully segmented characters, 1.416 characters were recognized correctly, so it had an accuracy of 99%.

Keywords: Automatic Number Plate Recognition; Character Recognition; Deep Learning; MobilenetV2.