ABSTRACT

The accident rate for pedestrians in Indonesia is very high. In the period from January to August 2023, in Indonesia there have been 10,428 traffic accidents which resulted in pedestrians becoming victims. To minimize the number of pedestrian accidents, information technology can be implemented to classify pedestrians. For this reason, in this research, pedestrian classification was carried out using a convolutional neural network (CNN) with the ResNet 50 architecture. The dataset used to build the model in this research is the Inria Person dataset plus the PennFudanPed dataset which is used as a pedestrian class and the Inria Holiday dataset which is used as a class. no pedestrians so that the image comparison is balanced. The best model was obtained with an accuracy of 99.14% with hyperparameter batch size value is 8, learning rate is 0.0001 and dropout is 0.5. After testing using test data, an accuracy value of 99.5% was obtained.

Keywords : Pedestrian, Citra, Inria, PennFudanPed, Convolutional Neural Network, Resnet50