

## ***ABSTRACT***

Optical Character Recognition (OCR) is a technology that reads text on digital images. The train carriage numbering label serves as information on the train carriage data such as type, class, year of operation and train serial number. Data collection of train carriage number labels is often not recorded by station officers due to the large number of train cars.

This OCR technology uses image processing to detect text. The use of OCR technology is very useful in various applications, one of which is in this study for reading the labels of moving train cars. The method used is the Haar method which to detect labels from train cars, then image processing is processed using OpenCV. Processed image from the image processing are read by the Tesseract OCR which then the text from labels train car along with the type of the train car will be displayed on the monitor screen.

In this final project, a system created can detect text from train labels in real-time and video feeds at six different speeds, which are 0cm/s, 1,2cm/s, 1,5cm/s, 2cm/s, 3cm/s and 6cm/s with two lighting levels of 65 lux and 110 lux. This OCR detection system is able to achieve an accuracy rate of 92%.

***Keywords:*** *Optical Character Recognition, image processing, train car label, Haar.*