

ABSTRACT

So far, train label data collection is still done manually and has not been done using the system. One suitable solution is to design and implement an Object Detection and Optical Character Recognition system.

In this final project, we will discuss about the application of object detection systems to assist the OCR process and also discuss about the implementation of Deep Learning algorithms. This system utilizes object detection technology to determine the angle, color, and also the level of lighting in the image to be taken for supporting the OCR process.

This framework can increase the productivity in information assortment of working train numbers, and can likewise gather train numbers when the train is moving. This framework can work with an exactness of 75% utilizing the article discovery model, in particular EfficientDet Lite1. The predefined model is seen in view of the estimation of the precision esteem in every one of the tried models.

Keywords: *object detection, neural networks, label image conversion, trains, Raspberry Pi, Camera, OCR*