

## ABSTRACT

*Classification of Javanese Script, HANACARAKA or Carakan Script is very necessary, because it helps in knowing the shape of each Javanese Script or Carakan Script that varies from one to another. Javanese or Carakan script has 20 letters, namely ha, na, ca, ra, ka, da, ta, sa, wa, la, pa, dha, ja, ya, nya, ma, ga, ba, tha and nga. This condition can be a problem in the discovery of inscriptions because of their different shapes. Convolutional Neural Network (CNN) is one of the solutions in detecting and classifying Javanese alphabets or Carakan alphabets.*

*This Final Project research uses the YOLO method as a Javanese script letter detection algorithm. YOLO is one of the algorithms that is often used for the detection and classification of an object. Javanese or Carakan script has 20 letters, namely ha, na, ca, ra, ka, da, ta, sa, wa, la, pa, dha, ja, ya, nya, ma, ga, ba, tha and nga.*

*This research uses google collaboratoy with python 3.6 programming language and uses the YOLOv7 model to run the research. This research consists of 2 phases, namely the model training phase and the model testing phase with image size 224 and batch size 16. During training and testing, the model will be evaluated until it finds the best model that shows higher performance. The performance generated by YOLOv7 will be calculated based on the parameters of precission, recall, F1Score and mAP. The accuracy result obtained from the research is 99.4% and mAP is 95.7%.*

**Keywords:** *YOLO, Convolutional Neural Network (CNN), Javanese Script, Precision, Recall, mAP, YOLO.*