

ABSTRAK

This research uses YOLO CPU (central processing unit) without GPU (Graphics processing unit), YOLO is a new approach for object detection. Compared to advanced detection systems, YOLO makes more localization errors but is less likely to predict. With the YOLO version without a GPU, the real-time processing speed drops quite dramatically to only about 12 frames per second. Because a bridge has boundary conditions that can cause damage to the bridge, the load that is passed must be known to prevent damage, the authors make a design to measure the estimated weight on a bridge using object tracking and counting using the YOLO algorithm. The purpose of this research is to predict vehicle load. The vehicle load assumption based on the conversion of vehicle detection results by YOLO is generalized according to the vehicle classification issued by the Directorate General of Highways No. 01/ MN/ BM/ 1983 and Permenhub No. 14 of 2007. The results of the data obtained from the calculation and vehicle load, namely the duration of 149 seconds of video, the estimated bridge load obtained is 5564 TON.N

Kata Kunci: *YOLO, Vehicle Counting, Load Vehicle, OpenCV*