DESIGNING AND TESTING PARKING SLOT INFORMATION SYSTEM BASED ON DEEP LEARNING FASTER R-CNN METHOD

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ABSTRAK

Indonesian population is increasing rapidly. It effects on the increasing the number of vehicle production each year and the parking slots in each region. At present, most people travel using cars and buses, both of these vehicles often experience problems in parking spaces where slot availability was unpredicted. The problem can be solved by displaying the availability of slots at the website. The solution offered in this study is to implement a parking slot system that can be accessed via website using computer vision and digital image processing using deep learning methods. Using Faster R-CNN method, system can detect vehicle objects in real time. The system detects vehicle objects through dataset that has been previously. The system can classify vehicle objects and count the number of vehicles that are in the parking slot. The results of this study are detecting and counting the number of vehicles in the simulation in the parking slot by using a dataset in the form of toy vehicles, buses, and cars. The results of the detection accuracy of the dataset that has been trained on the basis of the calculation of the confusion matrix get 100% accuracy and precision respectively

Keywords: *Faster r-cnn, deep learning, training, dataset, computer vision, citra digital organization*