

ABSTRACT

IMPLEMENTATION OF COMPUTER VISION ON CAMPUS DISCIPLINE MOVEMENT INFORMATION SYSTEM (CASE STUDY: IIB DARMAJAYA)

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Object detection systems are important aspect in the field of computer vision which supports the development of advanced technology such as recently. This research aims to implement computer vision technology in the rules violator detection system. Within the IIB Darmajaya Academic Community, there is a Campus Discipline Movement program or GDK is an effort to form a person's moral attitude through a process of behavior that shows the values. The value of obedience, compliance, orderliness, and order. But there are violations such as smoking in any place which becomes an obstacle in the implementation of the program. To increase enforcement of discipline, human resources are limited to encourage the use of technology, one of the alternatives is to use artificial intelligence (Artificial Intelligence) in the form of computer vision, specifically using the YOLO (You Only Look Once) algorithm. This algorithm has been proven to be superior in speed and accuracy in object detection. On development, stage involves collecting datasets through online sources and taking pictures using a cell phone camera. A total of 7,057 images were used to train a violation detection model. Next, the training process is carried out validation and testing using Python with the help of software like Roboflow and Google Colab. The results showed that a violation detection system in place implementation can recognize the object of the violation. Evaluation has been carried out using confusion metrics and model performance parameters such as precision, recall, f1-score, and mAP. are expected to contribute to the improvement of the effectiveness of enforcing discipline within the campus environment and making contributions to preserving the existing culture of campus discipline.

Keywords: Computer Vision, Campus Discipline Movement, Yolo

