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| Title | Yus - A Deep Learning Algorithm for Collision Avoidance through Object and Vehicle Detection | | |
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| Abstract |  |
| One of the safety features that can alert drivers to the presence of other vehicles and reduce the risk of collisions is vehicle detection. In this study, the objective was to create a system for detecting vehicles, motorcycles, and traffic signals on the roads in University Malaysia Pahang using object detection techniques. The video was taken through Go-Pro camera to capture video footage of traffic objects on the roads in the district, which was then analysed using the YOLO-V8 deep learning algorithm. The system was trained on a pre-existing dataset of 1,068 images, with 70% of the dataset used for training and 30% for testing. After conducting a performance validation, the system achieved a mean average precision of 88.2% on training dataset and was able to detect different types of vehicles such as cars, motorcycles, and traffic lights. The results of this study could be beneficial for road safety authorities and researchers interested in developing intelligent transportation systems. | |