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(57) Abstract :

Our Invention "Helmet and License Plate Detection Using Machine Learning" In today's world, the increasing use of Motorcycles has prompted increment in road accidents and injuries. Helmet are not used by the motorcycle rider and is one of the major causes leading to death rate and injury. Currently, one procedure is to physically check use of helmet at the pavement junction or through the CCTV footage video, which requires human intervention to detect motorcyclists without helmet. The invented framework presents a computerization machine structure to distinguish the motorcycle rider with or without helmet from images. The system extracts objects class based on feature extracted. The system uses You Only Look Once (YOLO) framework which consists of Convolutional Neural Networks trained on Common Objects in Context (COCO) and combined with computer vision. YOLO's convolutional layers are modified to detect specified three classes and it uses a sliding-window process. The map (Mean Average Precision) on validation dataset achieved 81% by using training data.

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