Vehicle Overspeed Detection using YOLOV5 in Machine Learning

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Abstract: *The main reason of many road accidents that are occurring in modern days are due to over speed and negligence driving . Existing system uses many approaches and needed improvement in performance. Many Systems requires several specialized Hardware's and Sensors which makes it less practical and costly. More sensors increase the overall cost of the operation/ procedure becomes high and dependency of manual workforce is increased. There are several image processing techniques which uses edge detection to detect object and uses simple formula to detect the vehicle and calculate it's speed. These methods are very unreliable and the system works on hard-coded rules. The project uses computer vision and deep learning algorithms such as yolo to detect speeding violations and report violations to law enforcement officers. When speeding is detected, an image of the offending vehicle is captured and emailed to law enforcement. The system requires little manual effort and can run continuously. We are using opencv yolo machine learning algorithms and required python modules to identify any type of vehicles . These System requires almost no manual work and can work continuously. The Final output of the project will be an App like system which can be deployed easily and can be used easily. The system here understands the vehicle and it's type based on the training data provided.*

Keywords: Vehicle detection, speed check, Machine Learning, Yolov5

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