Introduction:

Smart Traffic System is a modern solution aimed at reducing road accidents and traffic violations by using computer vision technology to detect and record vehicles that violate traffic rules. The system would specifically detect violations such as jumping red lights and record the license plate numbers of the vehicles involved. The collected data would then be used to send e-tickets to the violators.

Problem Statement:

Traffic violations such as jumping red lights have become a major problem in many cities around the world, causing accidents and congesting roads. Traditional methods of enforcement, such as manual monitoring and ticketing, are time-consuming and often ineffective.

Motivation for the Solution:

Smart Traffic System provides a modern and efficient solution to this problem by using computer vision technology to automate the process of detecting violations and issuing tickets. This will help to reduce the number of accidents and improve road safety, as well as ease traffic congestion by encouraging drivers to follow the rules.

Methodology:

The system would use computer vision technology, such as object detection and license plate recognition algorithms, to detect and record vehicles that jump red lights. The recorded data would then be used to issue e-tickets to the violators.

Technology to be used:

Computer Vision: OpenCV, TensorFlow, or PyTorch

License Plate Recognition: ALPR (Automatic License Plate Recognition)

Object Detection: YOLO, Faster R-CNN

E-ticketing System: Node.js, Laravel, or Django.

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