The Application of Image Processing By Neural Networks for E-Challan to Control Traffic violation

Amit Kumar Shrivastava,
Asst. Prof. Navyug Arts and Commerce College,
Jabalpur

ABSTRACT

In this paper a new procedure to design E-challan system; there is a pressing need for the introduction of advanced technology and equipment to improve automation system of traffic commuters. ***E-challan*** *is a non contact enforcement system to curb violations and implement stricter traffic discipline among the traffic commuters.* ***E-Challans*** *are always backed by photo evidence only. There are multiple ways a vehicle is issued an e-challan. One method is with Surveillance Cameras, which take the violation photos which will be printed on the e-Challan. Second is with Digital Cameras, the cops will take snap shots of the violations on the field. Third is through Speed Laser Gun Cameras which capture the speed along with the photo of a speeding vehicle. Fourth is through Red Light Violation Cameras which take very High Resolution Image of vehicle jumping Red Signal.*

We propose for design a system for generate e-challan by image processing and transfer images through neural network into traffic control system. The system will detect vehicles number through images instead of using electronic sensors and high resolution camera embedded in the pavement. A camera will be installed alongside the traffic light. It will capture image sequences, De-noising tools are used to rectify noises from images so that clarity can be improved. The captured images are sequentially matched using image matching. As soon as the particular person identified by image matching, the record of that person will be retrieved from RTO department and the generated challan will send to vehicle owner address.

Keyword: *E-challan, Image Processing, de-noising, Neural Network, high Resolution Image,*