

Smart E-Challan System for Two Wheeler Traffic Violators

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Abstract: Motorcycles have always been the primary mode of transportation in developing countries. Motorcycle accidents have increased in recent years. One of the main reasons for fatalities in accidents is that a motorcyclist does not wear a protective helmet or travel as a triple seat. The most common way to ensure that motorcyclists wear a helmet or triple seat is by traffic police to manually monitor motorcyclists at road junctions or through CCTV footage and to penalize those without a helmet. But it requires human intervention and effort. So this System Proposes an automated system for detecting motorcyclists who do not wear a helmet and retrieving their motorcycle number plates from CCTV video footage. First, the system classifies moving objects as motorcycling or non-motorcycling. In the case of a classified motorcyclist, the head portion is located and classified as a helmet or non-helmet. Finally, for the motorcyclist identified without a helmet, the number plate of the motorcycle is detected and the characters on it are extracted by using the OCR algorithm.

Keywords: Helmet Detection, plate detection, Image Selection, Extraction, Machine learning

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