Abstract

Now-a-days two wheelers is the most preferred mode of transport. It is highly desirable for bike riders to use helmet. This paper presents image processing technique by which motorcyclists without helmet can be detected. In this moving vehicles can be detected by thresholding and then classified into motorcyclists and non motorcyclists by area and aspect ratio. If in case motorcyclist is detected without a helmet, the number plate of motorcycle is read and noted. A simple algorithm is designed that can help to recognize number plates of motor cyclists using images taken by camera. The recognition of number plate algorithm has five parts: image procurement, preliminary processing, fringe detection and segmentation, feature extraction and recognition of character number plates using suitable machine learning algorithms. A database will be generated with the records to identify every offender accurately and arrest of suspect’s vehicle, imposing helmet violation fines, the system implements pure machine learning in order to identify every type of helmet that it comes across with minimum computation cost.

References

Index Terms

Computer Science Image Processing

Keywords

Artificial Intelligence, Image processing, Machine learning
A Hybrid Approach for Helmet Detection for Riders Safety using Image Processing, Machine Learning, Artificial Intelligence