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| Title | Nighttime Vehicle Detection Methods Based on Headlight Feature: A Review | | |
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| Abstract |  |
| Vehicle detection is used for detecting vehicles on roads, highways, parking, or any other place. It plays a key function in the control and management of traffic. In the Intelligent Transportation System (ITS), nighttime identification and recognition of moving vehicles are the most challenging and important processes. The quantity of vehicles on the road has grown significantly in recent years, and as a result, road accidents are constantly occurring. Accidents are more likely to happen at night, according to statistics. The whole vehicle body remains invisible at night due to the absence of illumination. Visibility at night is the major issue for safe driving. The appearance of vehicle headlights at night conditions plays a key role. When driving at nighttime, drivers usually turn on high-intensity headlights, resulting in annoyance for drivers driving from the opposite direction. For oncoming vehicles, these high-intensity lights generate glare and induce temporary blindness. For this reason, most accidents happen at nighttime. In solving this problem, nighttime vehicle detection is of great significance. The main focus of this review paper is to examine, present, and summarize the various proposed methods and techniques, and future directions so that new methods of vehicle detection can be developed which are to circumvent accidents during the night and keep distance between the moving vehicles. Hopefully, this review paper will be helpful for future research and consideration either for developing improved algorithms or guidance or both. | |