

Review on Implementation of Artificial Intelligence and Machine Learning for Controlling Traffic and Avoiding Accidents

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Abstract : Accidents involving motor vehicles are more likely to cause serious injuries and fatalities. It also has a host of other perpetual issues, such as the regular loss of life and goods in accidents. To solve these issues, appropriate measures must be implemented, such as establishing an autonomous incident detection system that makes use of machine learning and artificial intelligence. In order to reduce traffic accidents, this article examines the overview of artificial intelligence and machine learning in autonomous event detection systems. The paper explores the major issues, prospective solutions, and use of artificial intelligence and machine learning in road transportation systems for minimising traffic accidents. There is a lot of discussion on additional, fresh, and developing approaches that less frequent accidents in the transportation industry. The study structured the following subtopics specifically: traffic management using machine learning and artificial intelligence and an incident detector with these two technologies. The internet of vehicles and vehicle ad hoc networks, as well as the use of wireless communication technologies like 5G wireless networks and the use of machine learning and artificial intelligence for the planning of road transportation systems, are elaborated. In addition, safety is the primary concern of road transportation. Route optimization, cargo volume forecasting, predictive fleet maintenance, real-time vehicle tracking, and traffic management, according to the review's key conclusions, are essential for ensuring the safety of road transportation networks. In addition to highlighting research trends, unanswered problems, and key research conclusions, the study also discusses the difficulties in applying artificial intelligence to road transport systems. Planning and managing the road transportation system might use the work as a resource.

Keywords : artificial intelligence, machine learning, incident detector, road transport systems, traffic management, automatic incident detection, deep learning

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