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(57) Abstract :

The present disclosure generally relates to a real-time traffic signal violation system (100) using machine learning and artificial intelligence techniques. The system (100) utilizes various data sources, such as video/image (102) as an input captured by one or more sensors (104), to analyze and detect instances of traffic signal violations by image processing with artificial intelligence (106). By applying machine learning techniques, the system (100) can accurately identify violations while minimizing false positives and negatives. The system (100) include real-time monitoring and intimation SMS alert (118), scalability across multiple intersections, adaptability to diverse environmental conditions, integration with existing traffic management systems, and data analysis for insights and decision-making. Therefore, the system (100) offers a cost-effective, accurate, and scalable solution for monitoring and managing traffic signal violations, ultimately making roads safer for all road users.

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