

AUTOMATIC VEHICLE COUNTING FOR TRAFFIC MANAGEMENT SYSTEM USING IMAGE PROCESSING AND IoT

Supriya G V¹, Sreelatha R¹, Sushmitha R¹, and Chiranjeevi Nayak B¹

¹BMS College of Engineering

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Abstract

Road traffic management is a critical component of intelligent city administration. Traffic congestion may be efficiently addressed by precisely calculating the number of vehicles likely to pass through a busy intersection ahead of time. The system can predict vehicle counts far before reaching the targeted traffic intersection by using image processing and techniques. Furthermore, monitoring data may be transferred through the internet to a remote-control hub situated anywhere in the city. The technology integrates seamlessly with existing traffic control systems, capturing vehicle pictures using strategically placed cameras. These photos are then analyzed using image processing techniques to count the cars properly. The data collected is sent to a centralized administration system for real-time monitoring and traffic analysis. Furthermore, the system optimizes traffic signal timings and provides drivers with real-time information, resulting in considerable congestion reduction, enhanced traffic flow, and important traffic management insights.

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