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Patent Search

Invention Title	REAL-TIME TRAFFIC MANAGEMENT USING IOT AND MACHINE LEARNING TECHNIQUES
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Abstract:

[055] A revolutionary system for real-time traffic management through the integration of IoT devices and Machine Learning algorithms. The invention continuously co analyses traffic-related data to make real-time adjustments to traffic flow, optimizing road use, reducing congestion, and enhancing safety. It also offers personalized suggestions to drivers, considers environmental sustainability, and seamlessly integrates with existing traffic infrastructure. Accompanied Drawing [FIGS. 1-2]

Complete Specification

Description:[001] The present invention relates to the field of traffic management, specifically leveraging Internet of Things (IoT) and Machine Learning (ML) techniq create an intelligent, real-time traffic control system.

BACKGROUND OF THE INVENTION

[002] The following description provides the information that may be useful in understanding the present invention. It is not an admission that any of the informatio provided herein is prior art or relevant to the presently claimed invention, or that any publication specifically or implicitly referenced is prior art.

[003] Further, the approaches described in this section are approaches that could be pursued, but not necessarily approaches that have been previously conceived pursued. Therefore, unless otherwise indicated, it should not be assumed that any of the approaches described in this section qualify as prior art merely by virtue c inclusion in this section.

[004] Traditional traffic control mechanisms largely rely on static algorithms and manual inputs. This means that the timing of traffic lights and other traffic control mechanisms is typically based on historical data and expected traffic patterns, with a limited capacity to adjust dynamically in response to real-time conditions. This responsiveness often leads to traffic congestion, particularly during peak hours or unexpected events, such as accidents or weather disturbances.

Moreover, the limitations of traditional traffic management systems are further highlighted by the increasing urbanization and the growth of the number of vehicles road. As cities continue to expand and the number of vehicles increases, the demand for efficient traffic management solutions becomes even more urgent.

[005] Furthermore, the rise in environmental awareness has increased the need for solutions that could help decrease carbon emissions, of which vehicular emissic significant component. Traffic congestion contributes to increased emissions as vehicles are forced to idle or move slowly for extended periods. Thus, a solution tha

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