Patent Search

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Abstract:

A cloud-based deep learning model and method for predicting battery drain in Electric Vehicles (EVs) are disclosed. The system leverages real-time data, including dri patterns, external factors, and weather conditions, to provide EV drivers with precise predictions of their remaining battery range, effectively mitigating range anxiety learning algorithms adapt continuously to changing conditions during EV operation, ensuring dynamic and accurate predictions. The system's cloud-based infrastruct facilitates real-time data exchange, enabling fleet management optimization, energy distribution, and grid strain reduction. Additionally, the system's role in vehicle manufacturing, policymaking, and the broader trend towards smart and connected vehicles is explored, highlighting its transformative potential in shaping the future sustainable transportation.

Complete Specification

Description:The proposed system falls within the field of transportation and energy efficiency innovation. It combines cloud computing and deep learning technique address the critical challenge of predicting battery drain in Electric Vehicles (EVs) by analyzing driving patterns and external factors. This invention leverages advance in artificial intelligence, particularly deep learning, to process vast datasets generated by EVs in real-time.

By utilizing cloud-based infrastructure, the system can continuously collect and analyze data from a fleet of electric vehicles, allowing for accurate and adaptive prec of battery drain. This innovation is at the intersection of sustainable transportation and machine learning, offering a solution that can optimize EV performance, enh user experience, and contribute to the broader goal of reducing carbon emissions by promoting the adoption of electric vehicles. Furthermore, it can serve as a fou for the development of intelligent EV charging and energy management systems, making it a vital component of the future of green mobility.

Background of the proposed invention:

The proposed invention, a cloud-based deep learning model for predicting battery drain in Electric Vehicles (EVs) based on driving patterns and external factors, em the intersection of two pressing global challenges: the need for sustainable transportation solutions and the rapid evolution of artificial intelligence and cloud comp technologies. Understanding the intricate relationship between EV battery performance and various contextual factors is paramount in ensuring the widespread ad of electric vehicles, which are a key component of efforts to reduce carbon emissions and combat climate change.

The advent of electric vehicles represents a significant step towards achieving a greener and more sustainable transportation system. EVs offer a cleaner and more environmentally friendly alternative to traditional internal combustion engine vehicles, primarily powered by fossil fuels. They contribute to reducing air pollution in environments, decreasing our reliance on finite fossil fuel resources, and mitigating the greenhouse gas emissions that drive global warming

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