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Energy Consumption Optimization of Electric Vehicle by Using Machine Learning: A Comparative Literature Review and Lessons Learned

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Abstract : The swift expansion of the transportation industry and its associated emissions have captured the focus of policymakers who are dedicated to upholding ecological sustainability. As a result, understanding the key contributors to transportation emissions is of utmost significance. Amidst the escalating transportation emissions, the significance of electric vehicles cannot be overstated. Electric vehicles play a critical role in steering us towards a low-carbon economy and a sustainable ecological setting. The effective integration of electric vehicles hinges on the development of energy consumption models capable of accurately and efficiently predicting energy usage. Enhancing the energy efficiency of electric vehicles will play a pivotal role in reducing driver concerns and establishing a vital framework for the efficient operation, planning, and management of charging infrastructure. In this article, the works done in this field are reviewed, and the advantages and disadvantages of each are stated.

Keywords : deep learning, electrical vehicle, energy consumption, machine learning, smart grid
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