

# Review of: "Internet of Things in Smart Grid: A Comprehensive Review of Opportunities, Trends, and Challenges"

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Potential competing interests: No potential competing interests to declare.

In this paper, the authors emphasize the significant research works that concentrate on the application of IoT to smart grids and summarize the current work done. The paper also discusses the various challenges and opportunities in smart grids while implementing the IoT, addressing the pioneering methods used in IoT along with their relevant application in different fields. The authors' work needs several improvements, such as:

1. The authors mention several objectives in different sections, but they are not clearly articulated in the introduction. The authors should explicitly define the research objectives at the beginning to guide the reader through the study.
2. Some technical terms, such as those related to IoT layers and protocols, are not clearly explained. The authors should ensure that all technical terms are well-defined and accurate to avoid confusion among readers who may not be experts in the field.
3. The last part lacks specificity and fails to adequately synthesize the main findings or propose specific avenues for future investigation. The authors ought to furnish a more succinct and influential conclusion that explicitly articulates the ramifications of the findings.
4. The literature review is broad but lacks depth in certain critical areas, such as specific IoT applications in the smart grid. More detailed analysis and comparison with previous studies are necessary to establish the novelty and contribution of the current work. The authors can also consider the work in "analysis of challenges and solution of IoT in smart grid using AI and machine learning techniques," "analysis of cyber security attacks and its solutions for the smart grid using machine learning and blockchain methods", "protecting IoT devices from security attacks using effective decision-making strategy of appropriate features,".
5. The article's structure is sometimes fragmented, with certain sections exhibiting redundancy. The authors should modify the structure to guarantee a coherent progression of ideas, removing unnecessary information and ensuring that each section adds to the larger argument.
6. The discourse regarding future research is ambiguous and lacks precise and practical findings that can be implemented. The authors ought to provide more specific and elaborate recommendations for forthcoming research, namely within the realm of advancing IoT technologies and their use in smart grids.
7. Although the essay addresses various subjects, it fails to clearly highlight this review's unique aspects in comparison to the current body of research. The authors should emphasize this work's distinctive contributions more prominently. Please go through the work in "integration of data science with the intelligent IoT (IIoT): current challenges and future

perspectives,”.

8. The data presented in the article is valuable. However, it lacks seamless integration with the text. To enhance the reader's comprehension of the data presented, the authors should provide a detailed explanation and reference for each figure within the main text.
9. There are occasions when citations are inconsistent or absent, especially in sections that cover important ideas such as smart grids and issues in IoT security. The authors should conduct a thorough evaluation of the citations to ensure that references adequately substantiate all statements.
10. The authors should cite more recent references, especially from the last five years, for better comparison.
11. I have noticed several grammatical mistakes and typographical errors. Please revise the entire manuscript in detail.