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

Priti Maheshwary

Potential competing interests: No potential competing interests to declare.

The paper "Internet of Things in Smart Grid: A Comprehensive Review of Opportunities, Trends, and Challenges" by Vaibhav Khare provides a thorough overview of the application of IoT technologies in smart grids. The author effectively highlights the significant research works, current trends, challenges, and opportunities in this domain. However, there are a few areas where the paper could be improved or expanded upon.

Strengths

1. The paper offers a comprehensive review of IoT applications in various sectors, including smart cities, agriculture, transportation, healthcare, and industrial domains, providing a broader context for understanding the role of IoT in smart grids.
2. The author clearly explains the need for smart technologies and the increasing number of connected devices worldwide, justifying the importance of the topic.
3. The paper discusses the benefits and drawbacks of IoT technologies, as well as the challenges for future researchers, providing a balanced perspective.
4. The author effectively explains the combination of IoT and smart grids, highlighting the role of IoT in improving the efficiency, reliability, and sustainability of power systems.

Weaknesses and Suggestions for Improvement

1. The paper lacks a clear methodology section, which would help readers understand how the literature review was conducted and the criteria used for selecting the studies included in the review.
2. While the paper covers a wide range of IoT applications, the depth of discussion varies across sections. The author could consider providing more detailed and critical analysis of the studies in each application area.
3. The paper could benefit from a more structured organization, with clear subheadings for each application area and a separate section for the challenges and opportunities in smart grid IoT.
4. The author could include more recent studies and examples to showcase the latest developments and trends in smart grid IoT.

5. The paper would be strengthened by including a section on the potential privacy and security concerns associated with the widespread deployment of IoT devices in smart grids.
6. The author could consider adding a conclusion section that summarizes the key findings, highlights the main contributions of the paper, and suggests future research directions.

Overall Assessment

Despite the aforementioned weaknesses, the paper "Internet of Things in Smart Grid: A Comprehensive Review of Opportunities, Trends, and Challenges" is a valuable contribution to the field of smart grid IoT. The author successfully provides an overview of the current state of research and highlights the potential benefits and challenges of integrating IoT technologies into power systems. With some improvements in structure, depth of analysis, and inclusion of recent studies, the paper could serve as a useful resource for researchers and practitioners working in this domain.