



REVIEWER'S REPORT

Manuscript No.50066

Date: 27-01-2025

Title: Artificial Intelligence Associated With The Evaluation Of The Degradation Process Of Photovoltaic Modules: Application Of Dynamic Bayesian Networks.

Recommendation:

- Accept as it is
- Accept after minor revision...yes.....
- Accept after major revision
- Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		yes		
Techn. Quality			yes	
Clarity			yes	
Significance			yes	

Reviewer Name:Dr.Shaweta Sachdeva

Date: 27-01-2025

Reviewer's Comment for Publication.: Paper Accepted with minor changes

Detailed Reviewer's Report

1. Abstract:

- Ensure the abstract succinctly highlights the main findings, methodology (use of Dynamic Bayesian Networks), and practical implications for evaluating photovoltaic module degradation.
- Consider rephrasing any overly technical terms for broader accessibility while retaining specificity.

2. Title:

- The title is informative but somewhat lengthy. Consider a more concise version, such as: "*Using Dynamic Bayesian Networks to Evaluate Photovoltaic Module Degradation with AI.*" This retains clarity while improving readability.

3. Introduction:

- Strengthen the introduction by emphasizing the importance of accurately evaluating photovoltaic degradation in renewable energy research.
- Briefly justify the choice of Dynamic Bayesian Networks (DBNs) over other AI methods.

4. Methodology:

- Ensure that the methodology section clearly outlines the development and application of Dynamic Bayesian Networks, including key parameters, training data, and assumptions.

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- If applicable, briefly explain how the DBNs compare to alternative AI models in terms of effectiveness or computational efficiency.

5. Results and Discussion:

- Highlight key results with clear references to the figures or tables. Consider including visual aids that demonstrate the effectiveness of DBNs in predicting or evaluating degradation.
- Discuss any limitations of the approach or areas for future research, such as scalability to different photovoltaic technologies or environmental conditions.

6. Conclusion:

- Reinforce the practical implications of using DBNs for real-world photovoltaic monitoring and maintenance.
- Suggest specific applications or scenarios where this approach could significantly improve performance or cost-efficiency.

7. Figures and Tables:

- Verify that all figures and tables are clearly labeled, well-organized, and directly support the analysis. Ensure any graphs showing degradation processes are easy to interpret.

8. Language and Clarity:

- Simplify overly technical sentences to improve accessibility for interdisciplinary readers. For example, explain specialized terms like "Dynamic Bayesian Networks" briefly on first use.
- Break up long paragraphs or complex explanations into digestible sections.

9. References:

- Ensure the references include a mix of recent studies in photovoltaic technology, AI applications, and Bayesian networks.
- Verify consistent formatting and citation style throughout.

10. Title Clarity and Scope:

- If possible, clarify whether the scope includes specific environmental factors, datasets, or photovoltaic technologies. For example, add "under diverse environmental conditions" if applicable.