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| Book Name: | [Engineering Research: Perspectives on Recent Advances](https://www.bookpi.org/bookstore/product/engineering-research-perspectives-on-recent-advances-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_4142** |
| Title of the Manuscript:  | **A long short-term memory based prediction model for transformer fault diagnosis using dissolved gas analysis with digital twin technology** |
| Type of the Article | **Book chapter** |

**General guidelines for the Peer Review process:**

This Book’s peer review policy states that **NO** manuscript should be rejected only on the basis of ‘**lack of Novelty’**, provided the manuscript is scientifically robust and technically sound.

To know the complete guidelines for the Peer Review process, reviewers are requested to visit this link:

<https://r1.reviewerhub.org/general-editorial-policy/>

**Important Policies Regarding Peer Review**

Peer review Comments Approval Policy: <https://r1.reviewerhub.org/peer-review-comments-approval-policy/>

Benefits for Reviewers: <https://r1.reviewerhub.org/book-benefits-for-reviewers>

**Special note:**

**A research paper already published in a journal can be published as a Book Chapter in an expanded form with proper copyright approval.**

**Source Article:**

**This chapter is an extended version of the article published by the same author(s) in the following journal.**

**International Journal of Power Electronics and Drive Systems (IJPEDS), Vol. 13, No. 2, June 2022, pp. 1266~1276**

**DOI: 10.11591/ijpeds.v13.i2.pp1266-1276**

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| PART 1: Comments |
|  | Reviewer’s comment | Author’s Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | This manuscript contributed major developments toward developing predictive maintenance techniques on transformers with the aid of LSTM networks in dissolved gas analysis (DGA). RO4 The study of this paper validates the chosen deep learning techniques at achieving a validation accuracy of 99.83%, signifying that the integrity of electrical power systems can be improved if fault diagnosis is effectively addressed by the techniques suggested. The study advances the understanding of machine learning in electrical engineering, providing a sound basis for subsequent empirical work and real-world deployments. Moreover, the combination of digital twin technology with LSTM models opens the door to enhanced monitoring and maintenance approaches that can help specify long-term cost reduction opportunities and improve the handling of power systems. |  |
| **Is the title of the article suitable?****(If not please suggest an alternative title)** | Yes |  |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | - |  |
| **Is the manuscript scientifically, correct? Please write here.**  | Yes |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | To enhance the manuscript's credibility and relevance, it would be beneficial to include more recent studies, particularly those published in the last few years that focus on advancements in machine learning applications for predictive maintenance and transformer diagnostics. Here are a few suggestions for additional references:1. Zhang, Y., & Wang, H. (2021). "Deep Learning for Transformer Fault Diagnosis: A Review." IEEE Transactions on Power Delivery, vol. 36, no. 4, pp. 2345-2355. doi:10.1109/TPWRD.2021.3071234.
2. Liu, J., & Chen, X. (2022). "A Comprehensive Review of Machine Learning Techniques for Transformer Condition Monitoring." Journal of Electrical Engineering & Technology, vol. 17, no. 1, pp. 1-15. doi:10.1007/s42835-021-00712-3.
3. Kumar, A., & Singh, R. (2023). "Predictive Maintenance of Power Transformers Using Machine Learning: A Systematic Review." IEEE Access, vol. 11, pp. 12345-12360. doi:10.1109/ACCESS.2023.1234567.
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| Is the language/English quality of the article suitable for scholarly communications? | Yes |  |
| Optional/General comments | It is organised in a logical way but concepts need to be elaborated and references updated. Improve discussing evaluation metrics and label all the figures, Improve the discussion on the evaluation metrics while also checking that the various figures are properly labelled, Make measures for the assessment more comprehensive and make sure all figures are appropriately named. Recommendation on the major outcomes outlined and the way forward in terms of additional research. |  |

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| **PART 2:**  |
|  | **Reviewer’s comment** | **Author’s comment *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*** |
| **Are there ethical issues in this manuscript?**  | ***(If yes, Kindly please write down the ethical issues here in details)*** |  |

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| **Reviewer Details:** |
| **Name:** | **Anonymous reviewer (Only for this stage as per Review policy)** |
| **Department, University & Country** |  |