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| Journal Name: | [**Journal of Engineering Research and Reports**](https://journaljerr.com/index.php/JERR) |
| Manuscript Number: | **Ms\_JERR\_133345** |
| Title of the Manuscript: | **Enhanced Malware Detection in windows Application Using Ensemble Learning Technique** |
| Type of the Article | **Short communication** |

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| PART 1: Comments | | |
|  | Reviewer’s comment **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | 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.** | The manuscript presents an ensemble learning-based approach for malware detection in Windows applications. It highlights the use of AdaBoost and decision trees to enhance detection accuracy, which is crucial in cybersecurity. The research is relevant due to the increasing sophistication of malware attacks and the limitations of traditional detection methods. The proposed approach contributes to the field by improving detection precision, recall, and overall robustness. | An ensemble learning-based method for detecting malware in Windows applications is presented in the manuscript. It emphasizes how AdaBoost and Decision Trees can improve detection accuracy, which is essential in cybersecurity. The growing complexity of malware attacks and the shortcomings of conventional detection techniques make the research pertinent. The suggested method advances the field by enhancing overall robustness, recall, and detection precision. These contributions are now prominently highlighted in the updated manuscript. |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | The title is suitable for the study. | Yes, it is suitable |
| 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. |  The abstract provides a general overview but contains redundant and repetitive statements.   The objective and methodology should be clearly stated in a concise manner.   Clearly mention key performance metrics (e.g., precision, recall, F1-score) in the abstract. | I agree. Repetitive and unnecessary statements have been eliminated from the abstract. The goal and approach are now succinctly and clearly stated. To further clarify the research contributions, important performance metrics (such as precision, recall, and F1-score) have been specifically mentioned in the abstract. |
| Is the manuscript scientifically, correct? Please write here. | The methodology is well-structured, utilizing **AdaBoost with Decision Trees** for classification. However, the manuscript does not clarify **why AdaBoost was chosen over other ensemble methods** such as Gradient Boosting or XGBoost. The model evaluation includes **accuracy, precision, recall, and F1-score**, which are standard performance metrics. The implementation details lack a discussion on **computational complexity, time efficiency, and model scalability**.   * Suggested Revision: Include a comparative analysis with existing malware detection approaches to justify the model's superiority. | The approach, which uses AdaBoost with Decision Trees for classification, is well-organized. But the original paper didn't explain why AdaBoost was selected instead of other ensemble techniques like XGBoost or Gradient Boosting. A comparative analysis has been included to address this and support the choice of AdaBoost. The updated manuscript also includes a discussion of model scalability, time efficiency, and computational complexity. |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | References are relevant and recent, covering literature from **2021-2025**. | No additions are required |
| Is the language/English quality of the article suitable for scholarly communications? | The manuscript has multiple **grammatical errors, typographical mistakes, and repetitive phrases**.   * Examples:   + "Detecting malware is essential for defending computer systems against attacks that jeopardize their operation and security." *(repeated twice in the abstract)*   + "windows malware detecion dataset" *(should be corrected to "Windows Malware Detection Dataset")* * Suggested Revision: A thorough **proofreading and language refinement** are needed for clarity and readability. | I agree. There were numerous typographical errors, grammatical errors, and repetitive phrases in the manuscript. The following changes were made after a careful proofreading: - The abstract's repetitive sentences were eliminated. - "Windows malware detecion dataset" has been changed to "Windows Malware Detection Dataset." Overall, the clarity and readability have been enhanced. |
| Optional/General comments | The results are well-presented with figures and tables. But Figure 2 (Accuracy Graph) lacks axis labels and Figure 3 (Precision Graph) does not specify class-wise performance.  Ensure **axis labels, legends, and detailed descriptions** for all figures. | The figures and tables in the results section are presented in an attractive manner. Nevertheless, axis labels were absent from Figure 2 (Accuracy Graph) and class-wise performance was not specified in Figure 3 (Precision Graph). To ensure clarity, these problems have been resolved by including the proper axis labels, legends, and thorough figure descriptions. |

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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)* | This study found no ethical issues. All required attributions have been made, and the dataset used is openly accessible. This study did not use any human or animal participants. |