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| Book Name: | [**New Horizons of Science, Technology and Culture**](https://bookstore.bookpi.org/product/new-horizons-of-science-technology-and-culture-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_5950** |
| Title of the Manuscript:  | **Predicting Diabetes Using Machine Learning: A Comprehensive Framework with Model Interpretability** |
| Type of the Article | **Book Chapter** |

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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.** | **This chapter presented a comprehensive study on the prediction of diabetes using machine learning techniques, focusing on both model accuracy and interpretability. It highlighted that HbA1c level, age, and blood glucose level were the most important predictors of diabetes. The insights drawn from this study provide a foundation for the development of intelligent diagnostic systems that can be integrated into healthcare infrastructures. The findings of the manuscript reinforce the growing importance of interpretable machine learning in healthcare and demonstrate that with the right combination of preprocessing, algorithm selection, and model explanation tools, ML can significantly advance the early detection and management of chronic diseases like diabetes.** |  |
| **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. | **I suggest adding some results that highlight the importance of the research.** |  |
| **Is the manuscript scientifically, correct? Please write here.**  | **Somewhat correct, as it needs to update Literature Review, add a methodology section, and strengthen the results by comparing them with previous research.** |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | **Resources are few and outdated. I suggest the following references:*** + - 1. **Machine learning and artificial intelligence in diabetes prediction and management: a comprehensive review of models, 2025**
1. **Application of machine learning in diabetes prediction based on electronic health record data analysis, 2025**
2. **Diabetes Risk Assessment: A Comparative Study of Decision Trees and Ensemble Learning Models, 2025**
3. **Diabetes Prediction Using Machine Learning Techniques: A Comprehensive Analysis, 2024**
4. **Machine Learning based Screening for Diabetes Risk Prediction, 2024**
5. **Diabetes Prediction Based on KNN, XGBoost, SVM and LR model, 2024**
6. **Using the Machine Learning Algorithms for Accurate Prediction of Diabetes, 2024**
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| Is the language/English quality of the article suitable for scholarly communications? | **The quality of English needs to be improved to be suitable for academic communication. Terms should be capitalized, such as "BMI" and "Gender." There are also some spelling errors that should be corrected.** |  |
| Optional/General comments | 1. **Literature Review is very few and outdated. Please add at least ten recent works, given the prevalence of this disease and the large number of recent works that have addressed this area.**
2. **Figures should be reformatted.**
3. **Scientific terms and abbreviations should be defined at the end of the chapter to facilitate reader understanding.**
4. **The researcher did not mention Performance Metrics. Therefore, they should be added.**
5. **The chapter needs to be reworked in some paragraphs.**
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| **PART 2:**  |
|  | Reviewer’s comment | Author’s comment *(if agreed with the 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?**  |  |  |

**Reviewer details:**

**Amal Hameed Khaleel, Basrah University, Iraq**