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| Journal Name: | [**Journal of Advances in Mathematics and Computer Science**](https://journaljamcs.com/index.php/JAMCS) |
| Manuscript Number: | **Ms\_JAMCS\_139406** |
| Title of the Manuscript: | **PROPOSAL OF A CONVOLUTIONAL NEURAL NETWORK-BASED PREDICTION MODEL FOR PROSTATE CANCER FROM MRI** |
| Type of the Article | **Original Research Article** |

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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** (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 paper presents a new approach to prostate cancer detection in the field of medical imaging. The authors have employed a CNN-based model that enables us to recognize the disease at an early stage through MRI scans. This study is of great significance for the medical and technology communities aiming to develop better diagnostic instruments.** | We thank the reviewer for this encouraging comment. Our manuscript highlights the application of Convolutional Neural Networks (CNNs) for the early detection of prostate cancer through MRI imaging. This innovative approach contributes to improving both the accuracy and speed of diagnosis, which is essential for clinical management. It also paves the way for future integration into clinical decision support systems, thereby enhancing the scientific and clinical impact of this research. |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | **yes** | We thank you for validating the title, which accurately reflects the content and objective of our study. |
| 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. | 1. **Add accuracyy, specificity, sensitivity** 2. **Add one or two lines about limitations** | We have enriched the abstract by incorporating key performance metrics such as accuracy, sensitivity, and specificity. A concise paragraph on the study’s limitations, notably the sample size and the need for further validations, has also been added to provide a comprehensive and transparent overview of the work. |
| Is the manuscript scientifically, correct? Please write here. | Compare with other existing models/approaches make a table if enough existing approaches are present | In accordance with this recommendation, we have included a section comparing our CNN model to other existing approaches, notably traditional methods and recent machine learning models. A summary table presents the comparative results, allowing for a clearer positioning of our contribution within the current scientific context. |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | Add more references | We have enriched the bibliography by adding several recent and relevant references from high-impact journals, thereby strengthening the scientific foundation and contextualization of our work in the field of CNN applications for prostate cancer. |
| Is the language/English quality of the article suitable for scholarly communications? | Grammatical issues and informal expressions are present. | A thorough linguistic revision was conducted by a native English speaker specialized in scientific writing. This process corrected grammatical errors, improved the style, and eliminated informal expressions, thereby ensuring the manuscript’s compliance with international journal standards. |
| Optional/General comments | **Add a para for dataset** | A detailed paragraph has been added to the Methodology section, describing the source of the MRI images, their total number, as well as the inclusion criteria and preprocessing steps applied. To improve clarity, a flowchart illustrating the key methodological steps was created and inserted. Additionally, a distinct heading was added for the methodology section to facilitate reading and comprehension of the process. |
|  | **Either make a flowchart of the methodology for better clarity or make a separate heading for methodology used.** | The Results section has been expanded to include the model’s performance on the test and validation datasets, with detailed indicators such as accuracy, sensitivity, specificity, and AUC.  The captions of the loss/accuracy graphs and the confusion matrix have been revised to clearly explain the content and significance of each figure, thereby facilitating interpretation of the results. |
|  | **Add testing/validation accuracy to whichever part of the manuscript you added training accuracy to.** | The Conclusion has been enriched to include a comprehensive summary of the obtained performances, the identified study limitations, future research perspectives, and the potential clinical impact. |
|  | **More descriptive captions explaining what each figure shows(loss/accuracy graphs and confusion matrix).** | Regarding data collection, we specify that the MRI images come from two sources: the public PROSTATEx database and data collected at HJ hospital. The appropriate citation for the PROSTATEx database has been added in accordance with editorial requirements. |
|  | **Summarize key findings including all accuracies testing and training, add limitations, future scope, to conclusion.** | A detailed paragraph has been added to the Methodology section, describing the source of the MRI images, their total number, as well as the inclusion criteria and preprocessing steps applied. To improve clarity, a flowchart illustrating the key methodological steps was created and inserted. Additionally, a distinct heading was added for the methodology section to facilitate reading and comprehension of the process. |
|  | **In 5.3 last line “For prediction we collected our data from one site and other data retrieved from HJ Hospital the data is categorized.” Which one site also add the citation for the dataset accordingly ?** | The Results section has been expanded to include the model’s performance on the test and validation datasets, with detailed indicators such as accuracy, sensitivity, specificity, and AUC. The captions of the loss/accuracy graphs and the confusion matrix have been revised to clearly explain the content and significance of each figure, thereby facilitating interpretation of the results. |

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| **PART 2:** | | |
|  | Reviewer’s comment | **Author’s Feedback** (It is mandatory that authors should write his/her feedback here) |
| **Are there ethical issues in this manuscript?** |  | non |