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| Book Name: | [**Science and Technology: Developments and Applications**](https://www.bookpi.org/bookstore/product/science-and-technology-developments-and-applications-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_4324** |
| Title of the Manuscript: | **Classification of Motor Imaginary in EEG using feature Optimization and Machine Learning** |
| Type of the Article | **Book Chapter** |

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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 article focus on brain-computer interface.**  **This article addresses the extraction of features from EEG signals, a fundamental step for distinguishing motor patterns.**  **The EEG is a non-stationary signal, varying in time and frequency, which requires advanced processing methods.**  **The signals are analyzed in different frequency bands (alpha, beta, gamma, delta), which are essential for identifying motor patterns.** |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | **No**  **Feature Optimization and Machine Learning in Motor Imagery Classification in EEG** |  |
| 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. | **Change the first sentence of the summary to this:**  **Diagnosis of chronic diseases through motor imaging relies heavily on EEG (electroencephalogram) classification.**  **And in the final, change this:**  **According to the evaluation's findings, the suggested algorithm compresses the current motor imagery EEG categorization technique quite effectively.**  **To this:**  **The evaluation results indicate that the suggested algorithm significantly improves the current technique of motor imagery EEG categorization.** |  |
| **Is the manuscript scientifically, correct? Please write here.** | **Yes, the manuscript is scientifically correct. The sections are organized in a fluid manner, with related works, a well-detailed proposal, conclusions, and references clearly presented. However, I suggest including the meanings of the acronyms the first time they appear, in order to make the reading more fluid and understandable for readers.** |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | **Yes, the references are sufficient and recent. There is no need to add more references.** |  |
| Is the language/English quality of the article suitable for scholarly communications? | Yes, the language and English quality of the article are suitable for scholarly communications. The writing is clear and coherent, effectively conveying the scientific content. |  |
| Optional/General comments | **The main scientific contribution of this paper is the development of a classification model based on deep neural networks (DNN) for the analysis of motor imagery EEG signals, optimizing feature selection through heuristic and metaheuristic techniques, such as TLBO. The work improves the accuracy of brain signal categorization, reducing bottlenecks in training and increasing the efficiency of the diagnosis of neurological diseases, such as Amyotrophic Lateral Sclerosis (ALS), within the context of brain-computer interfaces (BCI).** |  |

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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: | **Marcelo Josue Telles** |
| Department, University & Country | **Universidade Feevale, Brazil** |