Dear Editor, Dear Reviewers,

We sincerely want to thank you for you deep, detailed and insightful feedback concerning our manuscript titled "Anomaly Detection in Multi-Wavelength Photoplethysmography using Lightweight Machine Learning Algorithms". The comments are all valuable and constructive for revising and improving our paper.

We have addressed all comments by modifying the manuscript and the models accordingly. The corresponding response and adaptations are individually described in more depth below. Finally, the modifications are highlighted in the manuscript.

Yours sincerely,

Vlad-Eusebiu, Joan, Angel, Juan Carlos, Johan and Bruno

Reviewer 1

1. **The manuscript reports experiments and analysis of lightweight anomaly detection algorithms photoplethysmography. The manuscript has a lot of descriptive content and it is also very long to comprehend the research work done on anomaly detection in multi-wavelength PPG technology. 26 pages are many for a paper that simply covers a few ensemble learning methods, such as decision trees, Random Forest, SVM, a custom SVM algorithm, and an autoencoder towards machine learning algorithms, and that are state-of-the-art for the use case, in a top quality journal such as Sensors! The F1 scores and accuracy for the custom SVM algorithm are impressively high for various feature sets experimentally investigated in the study and these results can be interesting in the context of use case that use hand crafted feature generation based classifiers. The authors needs to shorten the manuscript by focusing the main experiments with the selected anomaly detection algorithms and present the most striking results in the main paper to 16 pages. Anything that does not fit in 16 pages can be made available online as Supplemental Material online.**

   Response: Thank you for your constructive comment. There was indeed a need to shorten the text size and keep a balance between descriptive content and results.

   Modifications: We have successfully condensed the article to 17 pages by reevaluating its structure and focusing on highlighting the most salient contributions and striking results of our research. We included the rest of the content that we considered necessary as Appendix. We struggled to keep the limit of 16 pages, but it was necessary to address other comments from the other reviewers.

2. **In addition the English and presentation style of the manuscript should be improved, for example using some concept diagrams, more equations, and succinctly described methods.**

   Response: Thank you for your remark. Your suggestions will help us present the research findings in a more concise and visually appealing manner. Due to the increased text size, we understand the difficulty in fully understanding the content.

   Modifications: We worked on incorporating tables, additional equations, and clearer descriptions of the methods to enhance the clarity and understanding of the content. We tried to apply your suggestions whenever possible, aiming to succinctly describe the concepts and use more reader-friendly formulations.