Dear reviewing committee,

I am writing to submit our manuscript entitled “Smart-Sensing Chairs for Sitting Posture Detection, Classification and Monitoring: A Systematic Literature Review” for consideration and review for publication in MDPI Sensors. Our literature review paper provides an in-depth analysis on the current landscape smart sensing chair systems, while also giving valuable insight regarding the sensor technology and the methods being adopted by researchers.

In this paper, we identified 34 similar studies across various research databases which employed non-invasive methods to classify different sitting postures. Our study reviewed different smart sensing technologies and highlighted that Force Sensing Resistors (FSR) were predominately used in posture detection compared to other sensors found. Additionally, our paper also touched upon some of the machine leaning models being. Overall, it was seen that Convolutional Neural Networks (CNN) and Artificial Neural Networks (ANN) were among the leading machine learning models being adopted. However, upon further investigation, it was observed that they didn’t outperform other statistical models, most likely due to the constrained and lack of diversity found within the training dataset. The absence of variety within the dataset looks to be a common problem seen among most studies, for it fails to represent people with various body shapes and musculoskeletal configurations. Furthermore, our paper also highlighted a major research gap which is the lack of evaluation being conducted in regard to the user-feedback mechanisms used to alert the end user in maintaining the right sitting posture.

Paper has not been submitted, not under consideration for publication in any other journal.

We confirm that neither the manuscript nor any parts of its content are currently under consideration or published in another journal. All authors have approved the manuscript and agree with its submission to MDPI Sensors.

We are grateful for your time and effort in reviewing the manuscript and look forward to hearing from you soon.

Sincerely,

Authors