*Reviewer 1:*

*Apart from minor correction in the use of English language, following major changes are recommended.*

*1.  Please revise the introduction with comparison to recent works that have implemented intelligent models for children with ASD, such as..*

*1. An Experimental Trial: Multi-Robot Therapy for Categorization of Autism Level Using Hidden Markov Model. https://doi.org/10.1177/07356331211040405*

*2. Toddler Screening for Autism Spectrum Disorder: A Meta-Analysis of Diagnostic Accuracy https://doi.org/10.1007/s10803-018-03865-2*

*Answer: we have already added these two references into the paper. Furthermore, we have compared our approach to the ones listed in the 2nd reference. It should be noted that our approach addresses another modality of children with autism that have not been addressed in other works. Thus, it is impossible to quantitatively compare our approach to the others.*

*xxx*

*2. Please explain if there are any effects on attention of the child when following features are changed,*

*size and shape of car*

*speed, trajectory of car*

*color patterns of the car*

*Answer: The speed and trajectory of the car are not controlled by us. It is controlled by users. Also, trajectory cannot be extracted since trajectory errors are large using only accelerometer. Thus, we have not included it in our analysis. Regarding the other parameters, we left the evaluation of the effect of these parameters on the screening results for the future work since it was out of our budget to develop different cars with such variety of parameters. We added this invaluable suggestion into the future work.*

*“Furthermore, we have to investigate the effects of size, shape, and color of the car on the results and the usage of ASD children.”*

*3. Please elaborate why the toy car is being called intelligent as it is not adapting itself with the requirements or needs of the child?*

*Answer: thanks for the note. We call it intelligent since it would be intelligent in screening children. You are totally right that it is not intelligent in adjusting itself to the needs of children. In case it is really misleading, we can change the title.*

*4. Please provide some statistical analysis for your results showing significance of the data.*

*Answer: Would you kindly explain further on what kind of significancy is required or suggested here? We have presented typical parameters for a classification problem such as accuracy, specificity, sensitivity, and F1 score.*

*Reviewer 2:*

*A comparison section must be added to compare the efficiency of your methodology with previous works*

*Answer: since our approach uses different modalities than the other methods, it is not possible to quantitatively evaluate the results. It should be noted that in this paper we propose two other modalities, i.e. accelerometer features and the shaft encoder features which both are related to stereotype and repetitive behaviors, which can complement the other screening modalities.*

*We have addressed the other methods in the related work part. And we have addressed our advantage over the others in the following paragraph*

*“It should be mentioned that other technology-based ASD screening, such as the robot-based ASD studies, confirmed the value of robots in evaluating social interactions, their cost and dependency to skilled operators are major drawbacks of these methods.”*

*Also, we have added the following sentence to the end of the end of the introduction and related work.*

*Introduction: “These modalities can be incorporated into other screening methods to increase the accuracy of such screening methods.”*

*Related work: “ Furthermore, it should be noted that our approach can be a complement to other screening methods to increase the accuracy of the results. “*

*that*

*Based on this feedback and the feedback from the first reviewer, we have made a comparison between our approach and the other approaches reported in the “Toddler Screening for Autism Spectrum Disorder: A Meta-Analysis of Diagnostic Accuracy https://doi.org/10.1007/s10803-018-03865-2 “*

*Reviewer 3:*

1. *“we studied other methods like random forest and MLP with data augmentation strategies too.” → this does not justify the only choice of SVM, the authors should provide comparison results.*

*Answer: Thanks for the suggestion. We have added the following table to the paper comparing these three approaches.*

1. *Also, to make the motivations stronger, the authors should include some recent state-of-the-art studies that support this idea, such as:*

*Li, Jingzhen, et al. "Non-invasive monitoring of three glucose ranges based on ECG by using DBSCAN-CNN." IEEE Journal of Biomedical and Health Informatics (2021). https://doi.org/10.1109/JBHI.2021.3072628*

*Bertini, Flavio, et al. "Automatic Speech Classifier for Mild Cognitive Impairment and Early Dementia." ACM Transactions on Computing for Healthcare (HEALTH) 3.1 (2021): 1-11. https://doi.org/10.1145/3469089*

*Enayati, Moein, Nasibeh Zanjirani Farahani, and Marjorie Skubic. "Machine Learning Approach for Motion Artifact Detection in Ballistocardiogram Signals." Proceedings of the 14th EAI International Conference on Pervasive Computing Technologies for Healthcare. 2020. https://doi.org/10.1145/3421937.3421970*

*… and similar*

*Answer: Unfortunately, we did not understand the close relation of these references to our work. We think that it would make the paper too long to address these secondary issues in the paper. We appreciate if the reviewer guides us further on the necessity on referencing these papers.*

*Reviwer 4:*

*While the work is interesting, I have following major concerns:*

1. *The writing requires substantial improvement.*

*Answer: thanks for the feedback. the paper has been thoroughly checked by a professional English writer.*

1. *It is required to include a list of technical contributions in the introduction section, outlining the tackled research challenges for early stage autism screening and its modelling process.*

*Answer: Thanks for the feedback. the following sentences are added to clearly address the contributions of the paper in the introduction.*

1. *The experiment design needs to include more comparison works. In its current form, it is hard to identify the research challenges, from either data structure, or feature design. It is difficult to understand the significance of such process.*

*Answer: since our approach uses different modalities that the other methods, it is not possible to quantitatively evaluate the results. It should be noted that in this paper we propose two other modalities, i.e. accelerometer features and the shaft encoder features which both are related to stereotype and repetitive behaviors, which can complement the other screening modalities.*

*We have addressed the other methods in the related work part. And we have addressed our advantage over the others in the following paragraph*

*“It should be mentioned that other technology-based ASD screening, such as the robot-based ASD studies, confirmed the value of robots in evaluating social interactions, their cost and dependency to skilled operators are major drawbacks of these methods.”*

*Also, we have added the following sentence to the end of the end of the introduction and related work.*

*Introduction: “These modalities can be incorporated into other screening methods to increase the accuracy of such screening methods.”*

*Related work: “ Furthermore, it should be noted that our approach can be a complement to other screening methods to increase the accuracy of the results. “*

*Based on this feedback and the feedback from the first reviewer, we have made a comparison between our approach and the other approaches reported in the “Toddler Screening for Autism Spectrum Disorder: A Meta-Analysis of Diagnostic Accuracy https://doi.org/10.1007/s10803-018-03865-2 “*

1. *Please include all the results for all potential classifiers in the context for comparison.*

*Answer: Thanks for the suggestion. We have added the following table to the paper comparing MLP, Random Forest, and SVM.*

1. *It appears that the data set size is quite small, only 46 samples. Please provide the deviation of the evaluation, such as 10 times 10-fold random cross validation results.*

*Answer: We chose 5 times since it gave us the best results. That is why we reported the results for this case.*