**Original Manuscript ID:** Access-2022-08575

**Original Article Title: “**Overlapped Data Processing Scheme for Accelerating Inference Procedure in Machine Learning”

**To:** IEEE Access Editor

**Re:** Response to reviewers

Dear Editor,

Thank you for allowing a resubmission of our manuscript, with an opportunity to address the reviewers’ comments.

We are uploading (a) our point-by-point response to the comments (below) (response to reviewers), (b) an updated manuscript with yellow highlighting indicating changes (*Supplementary Material for Review*), and (c) a clean updated manuscript without highlights (*Main Manuscript).*

According to Editor's recommendation, we are also uploading the editing certificate (*Supplementary Material for Review*) that ensures language and grammar accuracy.

Best regards,

Donghyun Kang et al.

**Reviewer#2, Concern # 1:** The abstract is not coherent. It would be good if authors can write a sentence describing numerical results and improvements over other methods.

**Author response:** Thank you for your suggestion. After reading your suggestion, we are revised abstract to describe improvement of ol.data.

**Author action:** In the abstract, numerical data on the increase in CPU/GPU utilization and decrease in training time were added to describe the improvement of the ol.data over the other method.

텍스트이(가) 표시된 사진

자동 생성된 설명



**Reviewer#2, Concern # 2:** Authors should pattern the motivation behind using this method to explain in the introduction.

**Author response:** Thank you very much for the informative comment, and as the reviewer pointed out, we realized that it would be better to clarify the motivation for using our proposed scheme in introduction more clearly.

**Author action:** In the introduction, we added a statement that emphasizes the existing method does not use enough idle hardware to explain the ol.data design motivation.

텍스트이(가) 표시된 사진

자동 생성된 설명



**Reviewer#2, Concern # 3:** Authors should provide the comments of the cited papers after introducing each relevant work. Authors also should provide more sufficient critical literature review to indicate the drawbacks of existing approaches.

1. Minimizing the overlapping degree to improve class-imbalanced learning under sparse feature selection: application to fraud detection
2. Diagnosis of vertebral column pathologies using concatenated resampling with machine learning algorithms

**Author response:** We are sorry for insufficient explanation at related work. Through the reviewer’s comments and referenced literature, we supplemented the explanation and added the statement about the limitation of existing methods.

**Author action:** In the related work, we classified the performance optimization research into three categories, introducing studies for each part and adding explanations. We also analyze and added the limitations of the overall related works.

텍스트이(가) 표시된 사진

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**Reviewer#2, Concern # 4:** Proofread the paper once again as there are many issues still there.

**Author response:** After reading your comments, we have reviewed and revised the entire paper for every pointed out the problems. We also considered relocating related work section after the introduction as same as the structure of the referenced paper. However, we did not change it because that would not be able to include what we intended to provide in the related work section.

**Author action:** -



**Reviewer#2, Concern # 5**: Extend the Literature review.

**Author response:** Thank you for your suggestion. After reading your suggestion, we have realized that it is better to investigate more about the relevant study.

**Author action:** In the related work, we investigated and added several related studies.

텍스트이(가) 표시된 사진

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**Reviewer#3, Concern # 1:** Your manuscript is structurally odd. Even if you look at the revisions confirmed after the first review round, it is quite strange to include related work before the conclusion. Structural modifications are required.

**Author response:** We are sorry for insufficient explanation

**Author action:** -



**Reviewer#3, Concern # 2:** I believe that there is too little contributions; there are only results related to your argued contributions, which are in Figure 12. In addition, in the practical performance of ol.data, an experimental approach is not appropriate and more proof is likely to be needed in both mathmatics and algorithm-wise

**Author response:** Thank you very much for your helpful comments. We carefully summarized the sentence that is pointed out by the reviewer.

**Author action:** -



***Note:*** *References suggested by reviewers should only be added if it is relevant to the article and makes it more complete. Excessive cases of recommending non-relevant articles should be reported to ieeeaccesseic@ieee.org*