

4 September 2020

Editorial Office, *Journal of Vision*

Dear Dr. X and members of the editorial board:

We have enclosed an original submission of original research for the *Journal of Vision* entitled, “Convolutional neural networks can decode eye movement data: A black box approach to predicting task from eye movements.”

**Contributions**

The enclosed manuscript presents a novel approach to classifying task from minimally processed eye movement data. Previous attempts to classify eye movements have focused on processing data and developing models to emulate cognitive and neural component processes. Our approach used a convolutional neural network framework unconstrained by theoretical assumptions. Our approach successfully decoded two separate eye movement datasets separately processed into timeline and image formats. Further analyses were conducted to the determine the effect of task set, feature set, and data format. To our knowledge, this study was the first to use a non-theoretical approach to decode timeline and image data formats. Furthermore, this study highlights issues with comparing classification outcomes using different task and feature sets. We believe that the findings presented in this manuscript have the potential to advance future data processing and model development approaches to classifying task from eye movement data.

**Suggested Reviewers:**

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Thank you for taking the time to consider this manuscript for publication.

Best Regards,

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