

Individualized Classification of Target Detection in Brain-Computer Interface

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Recently, many deep learning approaches have been applied in electroencephalography (EEG)-based classification. However, EEG signals are highly variable across individuals, making it difficult to develop generalized models. In this paper, we propose an individualized classification approach, which finds the best deep neural network for each individual. We achieved an increase 17% in classification accuracy on average when applying the best network to a subject compared to leave-one-subject-out approach. Our findings suggest that considering individual characteristics would be efficient for a practical brain-computer interface.