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(57) Abstract :
An automatic classification and artifact removal system for EEG signals employs machine learning techniques to enhance the accuracy and efficiency of EEG signal analysis. The system preprocesses EEG data, extracts relevant features, and utilizes trained machine learning models to differentiate between artifacts and genuine brain activity. Upon detecting artifacts, the system activates a removal process that minimizes the impact on the original EEG signal. Designed to adapt and improve over time, the system promises significant advancements in neurology, cognitive science, and brain-computer interfacing.

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