CogniSync

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*Abstract*— We are working to create a low-cost EEG headset for patients and psychologists to understand and view brain activity. This headset allows the user to interact with brain waves and provides information about the cognitive capacity of the brain. Our solution aims to help people to better understand mental states and cognitive functions using computational neuroscience and following the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) by the American Psychological Association. We are developing AI algorithms that assist in analyzing brain waves to provide precise insights. Our software provides detailed analysis of the patterns of brain waves and also assists psychologists and researchers to understand and utilize the findings. This connects neuroscience with real-world use by making the analysis of brain waves easier. Our main goal is helping people to improve mental health, boost their focus and productivity.

*Keywords: Computational Neuroscience, EEG, Neurotechnology, Cognitive capacity, Brain Computer Interface (BCI).*