

NeuroSonic: An Innovative Neuroacoustic Therapy to Enhance Mental Wellness with EEG Brain Signal

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Abstract:

NeuroSonic" presents an innovative EEGbased music treatment system painstakingly designed to improve mental wellness. NeuroSonic is a program that uses state-of-the-art algorithms to evaluate brainwave data from the frontal and temporal lobes within a particular frequency band. Leveraging electroencephalography (EEG) data obtained from participants engaged in to solve mathematical problem statements. The research aims to elucidate the distinct patterns of neural activation across different brain lobes. Through meticulous statistical analysis of EEG signals, the underlying mechanisms governing brain activity before and after listening the healing sounds and these conditions are explored using EMOTIVE. The study employs advanced signal processing techniques and statistical analysis to discern temporal and spatial dynamics in neural responses. We have collected EEG data from 20 no. of subjects both male and female. ANOVA analysis is used for statistical representation and SVM algorithm is used for data modelling process. We got 85 percent accuracy in data modelling. The challenging job is the mapping of EEG data and integrating it into the proposed device. This method utilizes EEG data and frequency analysis to create customized sonic settings for Autism patients, enhancing their mental health and endurance through therapeutic auditory experiences.

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