All Sciences Proceedings
http://as-proceeding.com/

AS-ABSTRACTS
https://as-proceeding.com/index.php/as-abstracts
ISSN: 2980-1834

*All Sciences Abstracts*,
*Volume 1, pp 10, 5, 2023*


# Predictive Modeling of Acrophobia Severity Using EEG Data

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***Abstract –*** This study draws upon EEG data collected from four environments from acrophobic patients and uses advanced machine learning algorithms to create a predictive model. It has revealed distinct EEG patterns correlated with severity of acrophobia, leading to an innovative EEG signature associated with this condition and thus potentially aiding early diagnosis and risk evaluation. Furthermore, this research investigates how different environments influence acrophobia symptoms, which could help shape tailored treatment strategies. This work makes strides toward using AI in the assessment and treatment of acrophobia, opening up promising avenues for data-driven personalized therapy plans. It brings value to fields like clinical psychology and neuroinformatics as well as underlining the necessity of further testing on larger, diverse populations.

*Keywords – Acrophobia, Electroencephalography, EEG, Deep Learning, Machine Learning.*