



QEEG Clinical Report

BrainLens V0.4

Report Description



Personal & Clinical Data

Name	Aboualfazl Bafandeh	Date of Recording	22-Feb-2025
Date of Birth - Age	20-Feb-2000 - 25.01	Gender	Male
Handedness(R/L)	Right	Source of Referral	Dr Tabatabaei
Initial Diagnosis	-		
Current Medication	-		

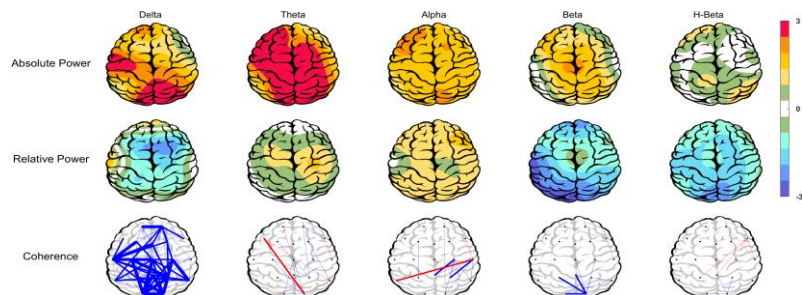
Dr Tabatabaei

Summary Report

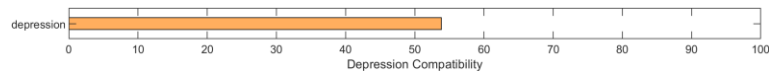
EEG Quality



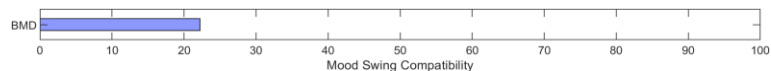
Z-score Information



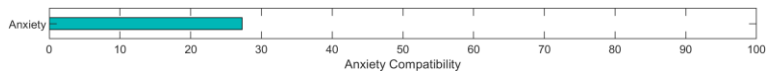
Compatibility with Depression



Compatibility with Mood Swing



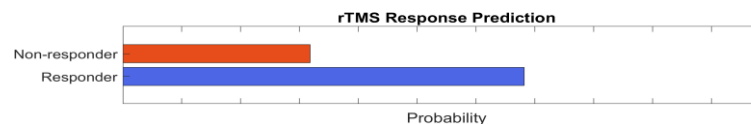
Compatibility with Anxiety



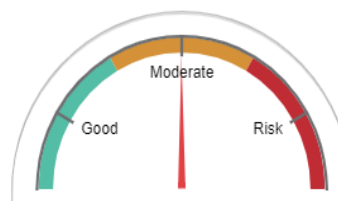
Arousal Level



TMS Responsibility



Cognitive Performance



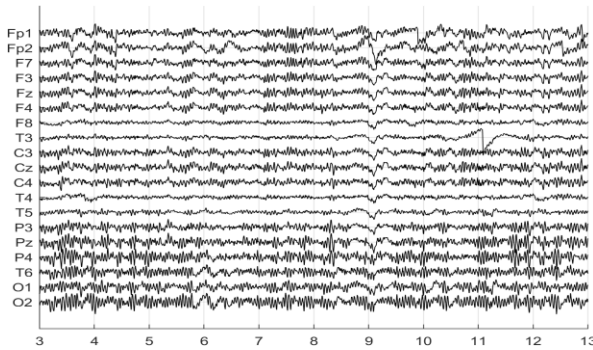
APF

Posterior APF-EC= 09.62

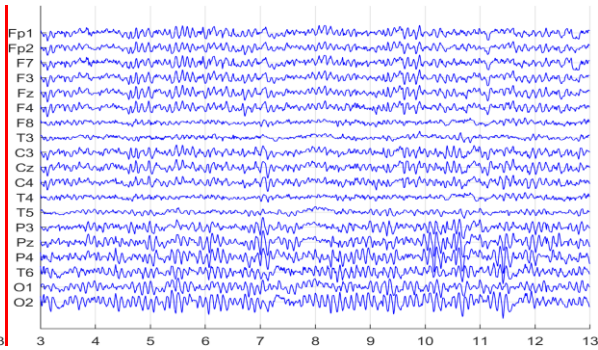
To investigate QEEG-based predicting medication response, please refer to the Report.

Denoising Information (EC)

Raw EEG



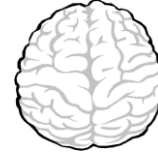
Denoised EEG



Flat Channels



Rejected Channels



Number of Eye and Muscle Elements

Eye	2	Muscle	0
-----	---	--------	---

Total Artifact Percentage



EEG Quality	good
-------------	------

Low Artifact Percentage



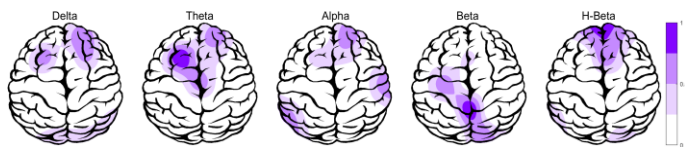
High Artifact Percentage



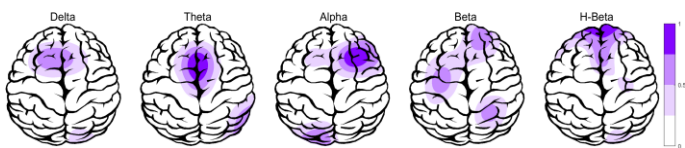
Total Recording Time Remaining	220.90 sec
--------------------------------	------------

Pathological assessment for mood disorders and adult ADHD

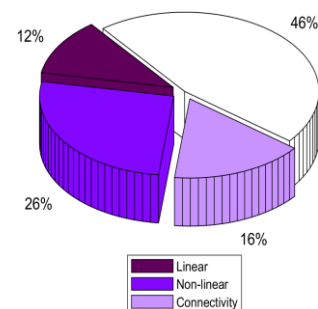
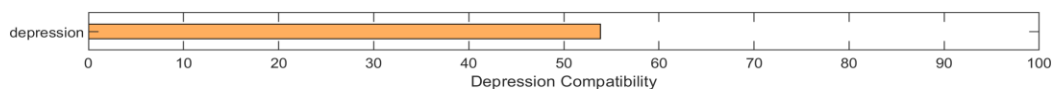
Compare to Mood Disorders Database



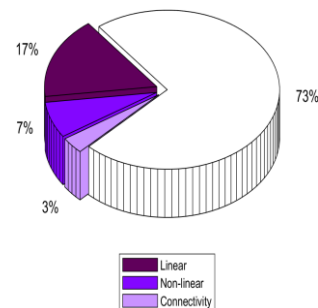
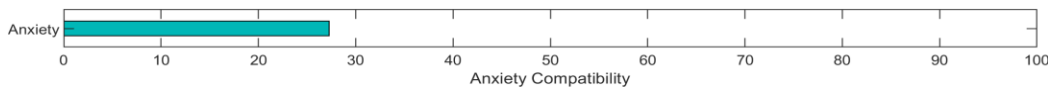
Compare to Adult ADHD Database



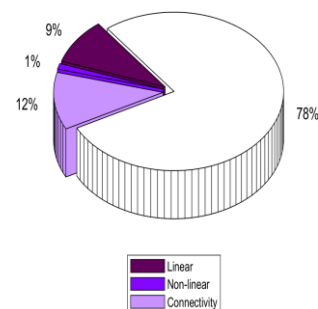
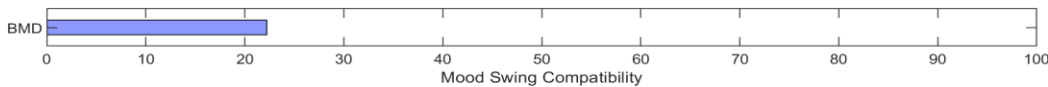
EEG Compatibility with Depression Diagnosis



EEG Compatibility with Anxiety Diagnosis

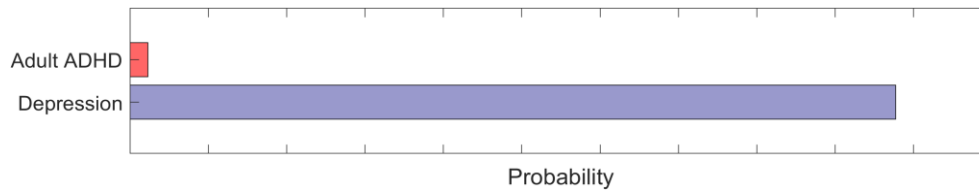


EEG Compatibility with Mood Swing Diagnosis *



* This index can only be investigated if there are symptoms of mood swings (R/O BMD or R/O mood swings).

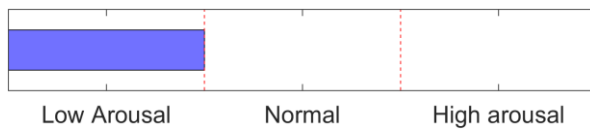
Depression and Adult ADHD Diagnosis Probabiliy



Cognitive Functions Aassessment



Arousal Level Detection

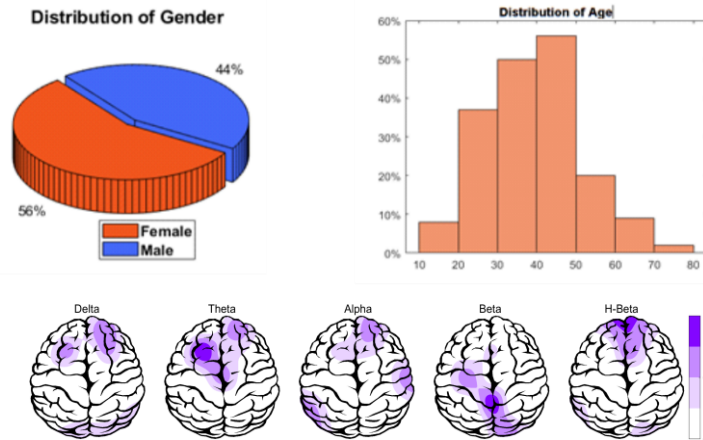


rTMS Response Prediction

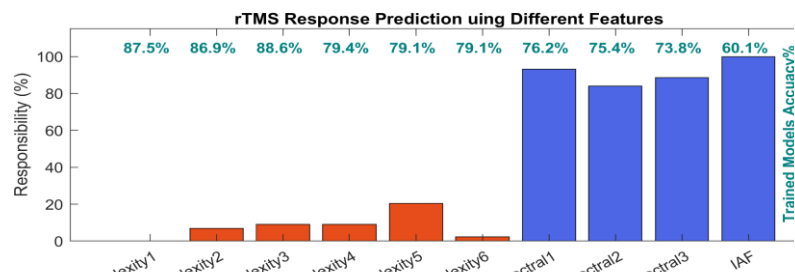
Network Performance

Accuracy: 92.1%
Sensitivity: 89.13%
Specificity: 97.47%

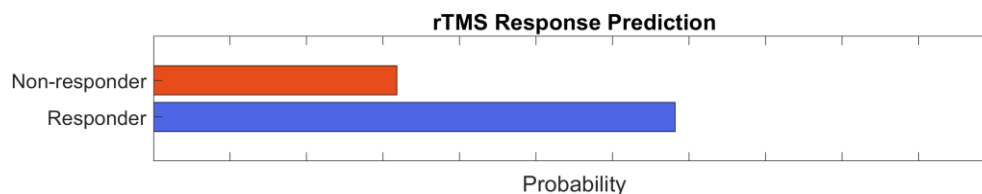
Participants Information



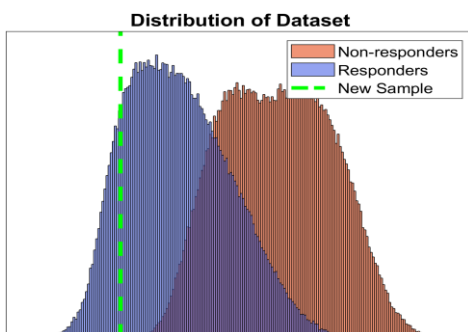
Features Information



Responsibility



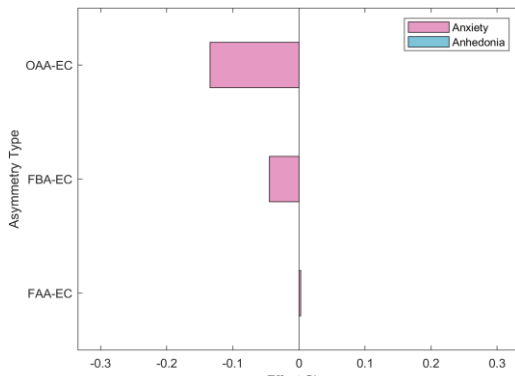
Data Distribution



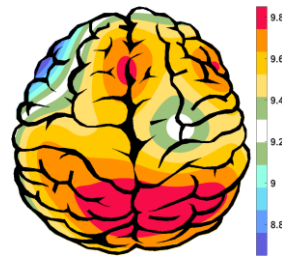
About Predicting rTMS Response

This index was obtained based on machine learning approaches and by examining the QEEG biomarkers of more than 470 cases treated with rTMS. The cases were diagnosed with depression (with and without comorbidity) and all were medication free. By examining more than 40 biomarkers capable of predicting response to rTMS treatment in previous studies and with data analysis, finally 10 biomarkers including bispectral and nonlinear features entered the machine learning process. The final chart can distinguish between RTMS responsive and resistant cases with 92.1% accuracy. This difference rate is much higher than the average response to treatment of 44%, in the selection of patients with clinical criteria, and is an important finding in the direction of personalized treatment for rTMS.

Alpha Asymmetry(AA)



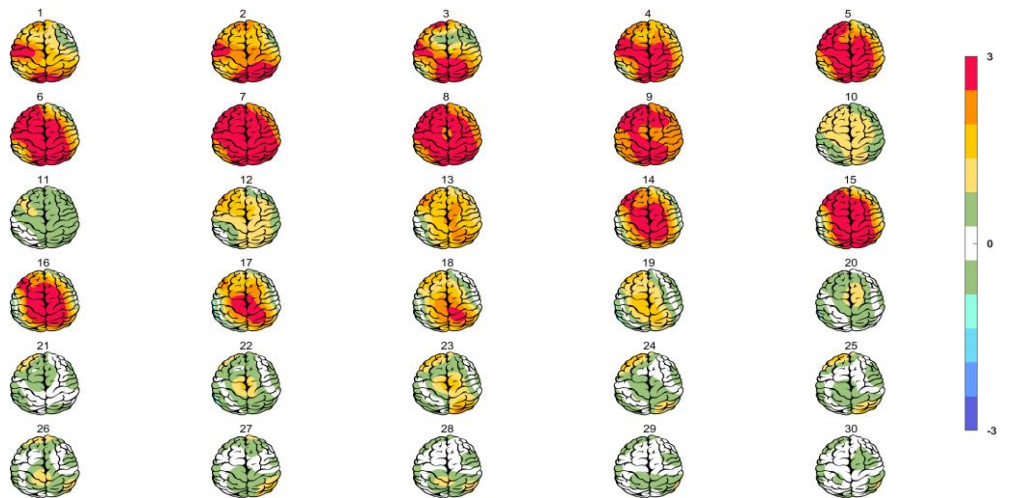
APF(EC)



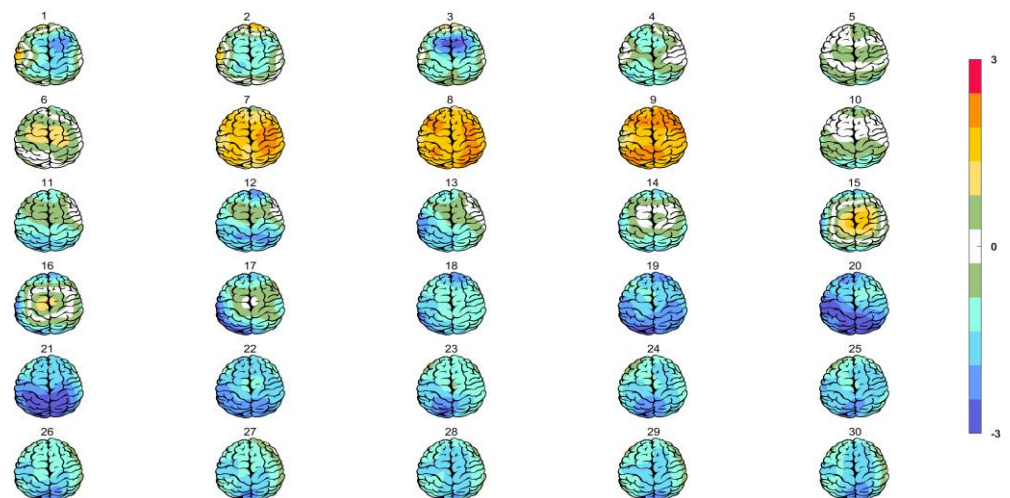
Frontal APF= 09.42

Posterior APF= 09.62

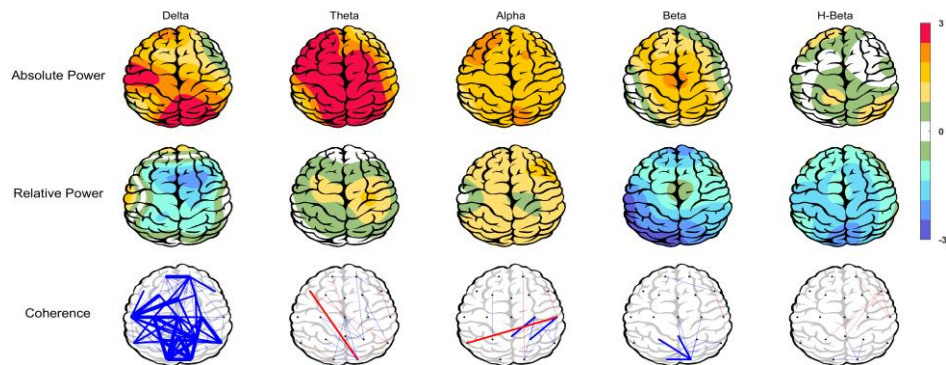
Absolute Power-Eye Closed (EC)



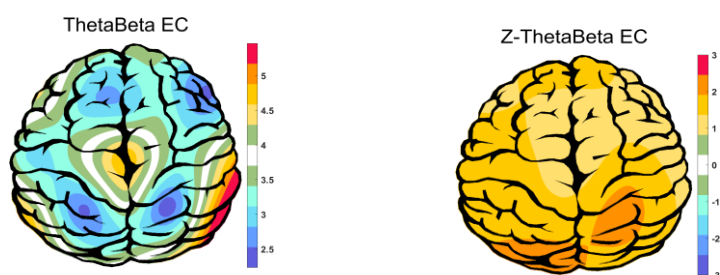
Relative Power-Eye Closed (EC)



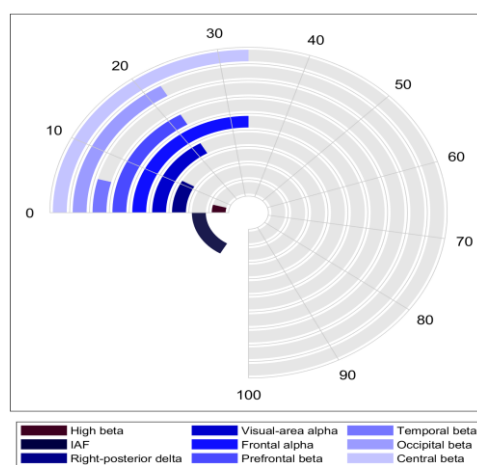
Z Score Summary Information (EC)



E.C.T/B Ratio (Raw- Z Score)



Arousal Level



EEG Spectra

