QEEG Clinical Report

BrainLens V0.4

Report Description

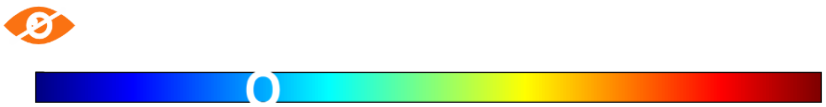
Personal & Clinical Data

Name	Tahaahmadi	Date of Recording	22-Dec-2024
Date of Birth - Age	14-Mar-2008 - 16.77	Gender	Male
Handedness(R/L)	Right	Source of Referral	Ms Mazloumi
Initial Diagnosis	-		
Current Medication	-		

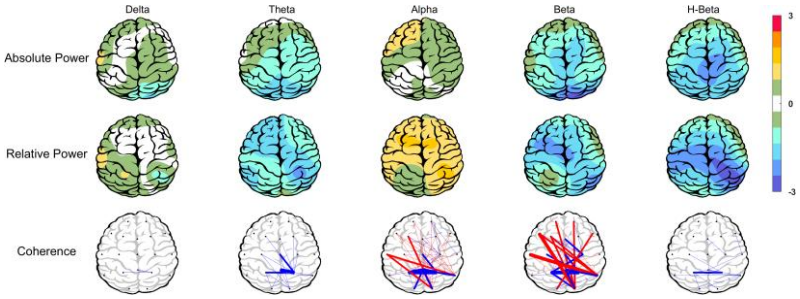
Ms Mazloumi

Summary Report

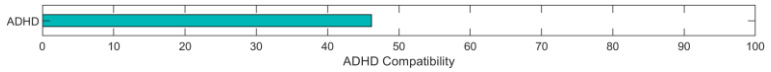
EEG Quality



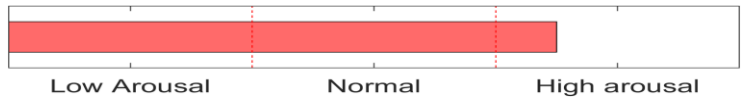
Z-score Information



Compatibility with ADHD



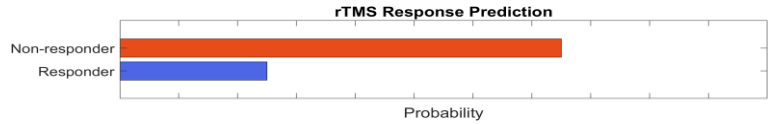
Arousal Level



APF

Posterior APF-EC= 10.62

TMS Responsibility

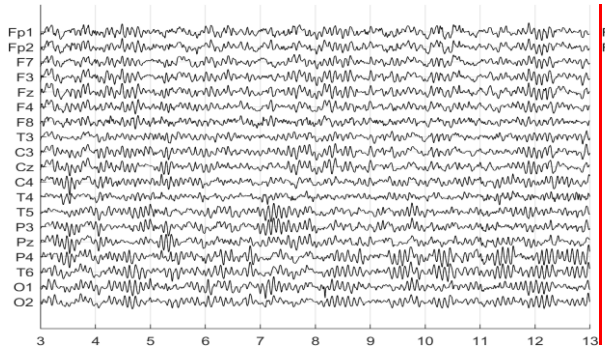


To investigate QEEG-based predicting medication response, please refer to the Report.

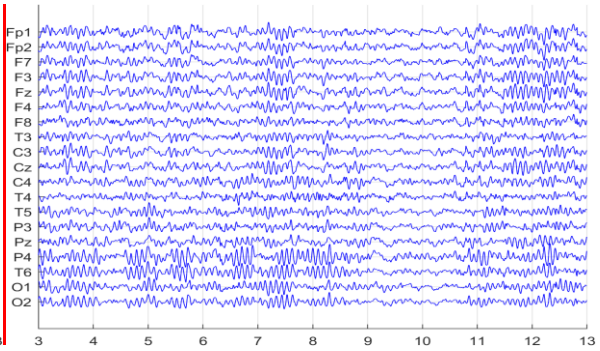
Tahaahmadi\Ms Mazloumi

Denoising Information (EC)

Raw EEG



Denoised EEG



Flat Channels

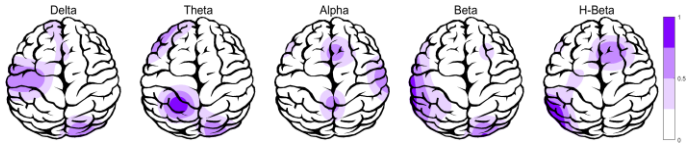
Rejected Channels

Number of Eye and Muscle Elements				Low Artifact Percentage	
Eye	0	**Muscle**	0		
Total Artifact Percentage				**High Artifact Percentage**	
EEG Quality	bad			**Total Recording Time Remaining**	23.87 sec

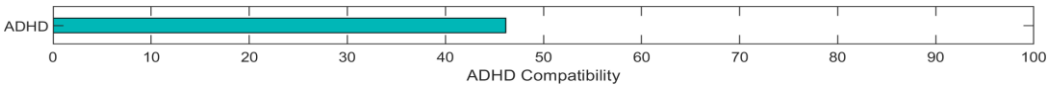
Tahaahmadi\Ms Mazloumi

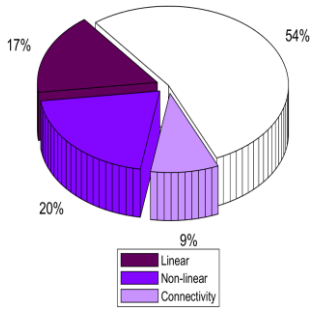
Pathological assessment for ADHD

Compare to ADHD Database

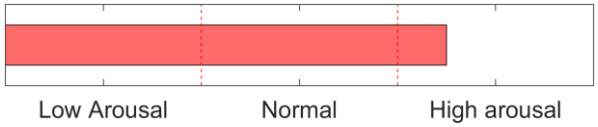


EEG Compatibility with ADHD Diagnosis





Arousal Level Detection



ADHD Clustering *

1. Least impulsive group, almost only inattentive. May respond to stimulants.

* If there is Paroxymal epileptic discharge in EEG data, this case needs sufficient sleep and should avoid high carbohydrate intake.
You can consider anticonvulant medications.

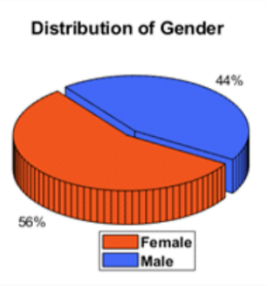
Tahaahmadi\Ms Mazloumi

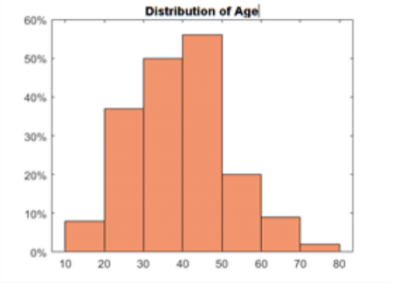
rTMS Response Prediction

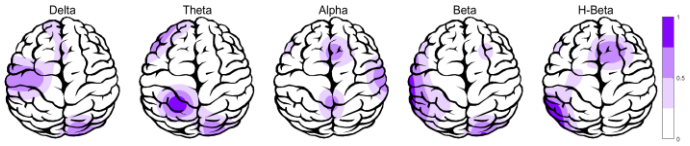
Network Performance

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

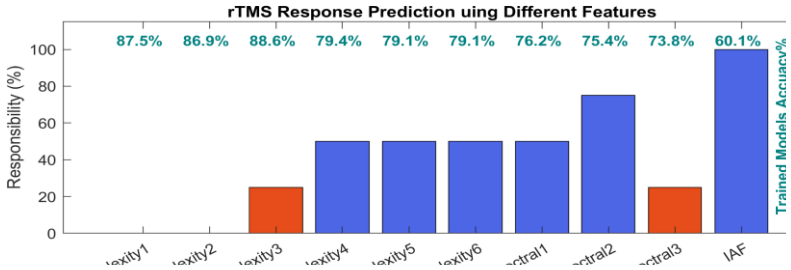
Participants Information



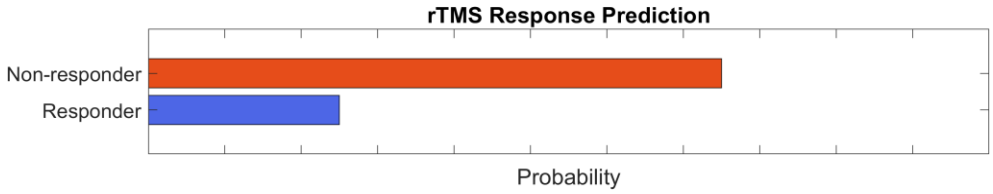




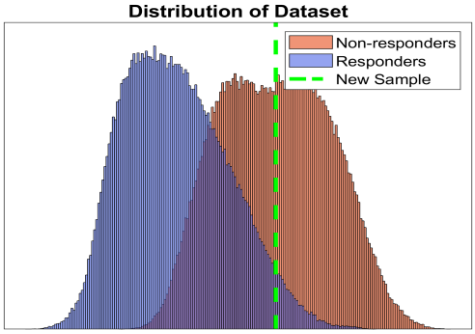
Features Information



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.

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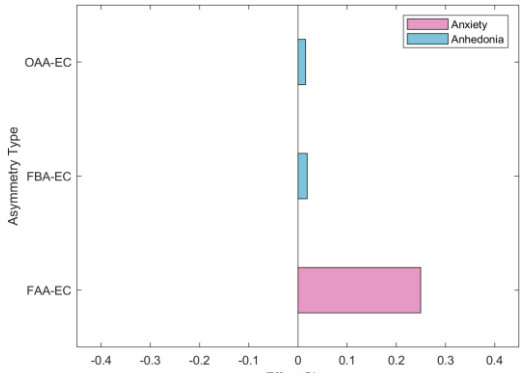
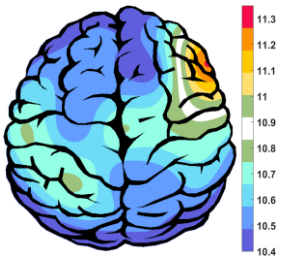
Alpha Asymmetry(AA)



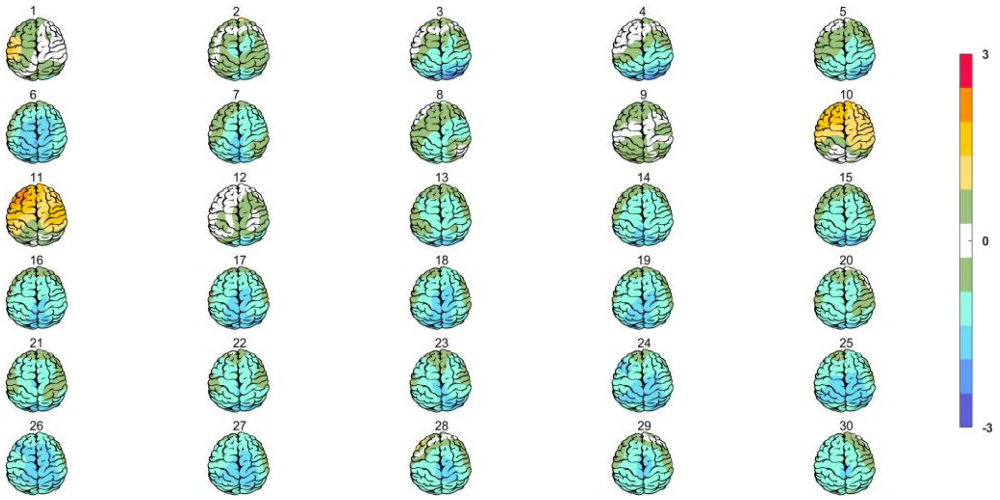
APF(EC)



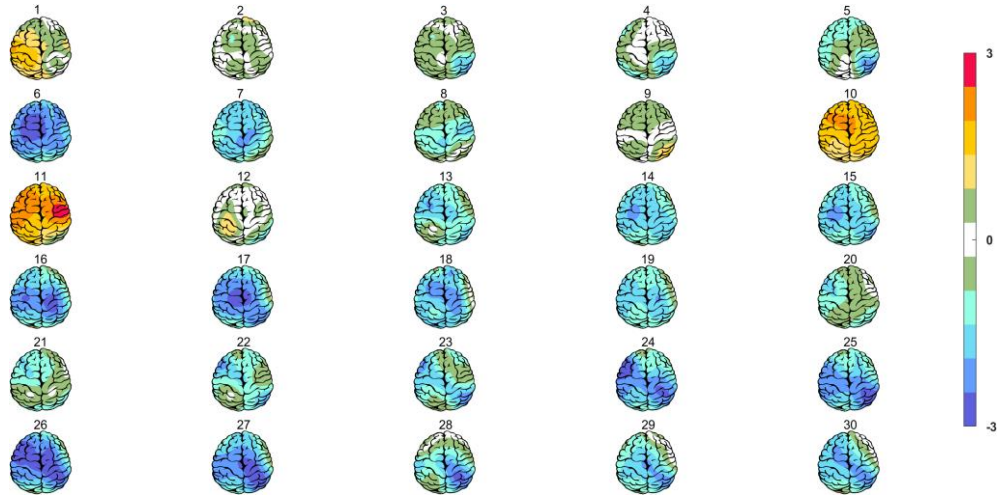
Frontal APF= 10.58

Posterior APF= 10.62

Absolute Power-Eye Closed (EC)



Relative Power-Eye Closed (EC)



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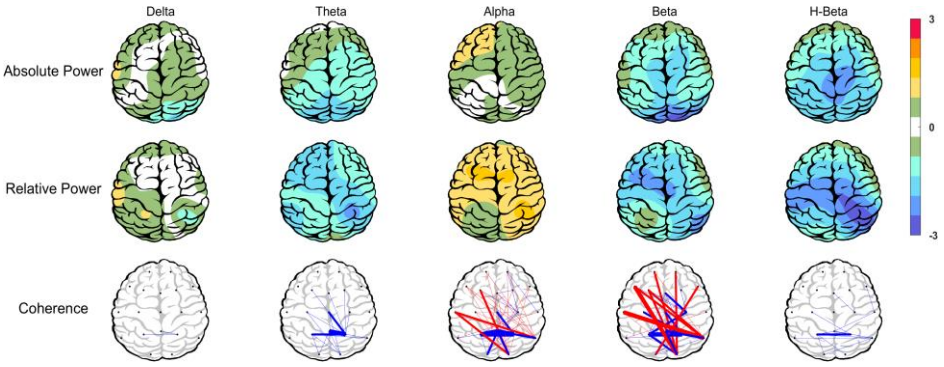
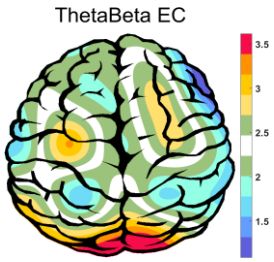
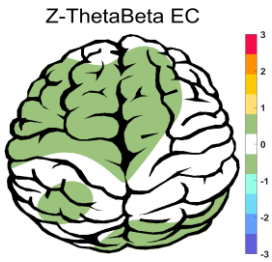
Z Score Summary Information (EC)

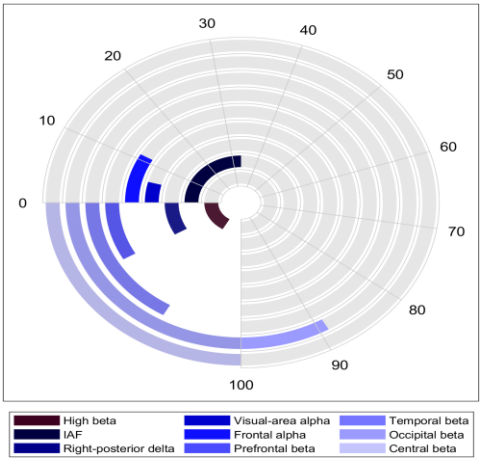


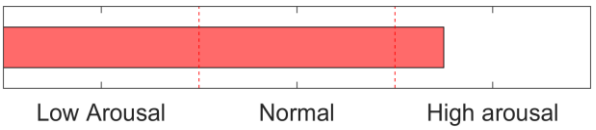
E.C.T/B Ratio (Raw- Z Score)





Arousal Level





EEG Spectra