



*python final project*

# Introduction

-Analyzing the Effects of Music Therapy on Prefrontal Alpha Band Power: A Comparative Study of Pre- and Post-Task EEG Activity.

-Research question :

How does pre-task brain activity differ from post-task brain activity during music-listening sessions in patients, focusing on alpha band power in the prefrontal region?

.

# Background

Relaxation is perceptible in EEG as increased alpha frequency (8-13 Hz), in the prefrontal regions(Fp1,Fp2 channels) which are associated with calm and focused states

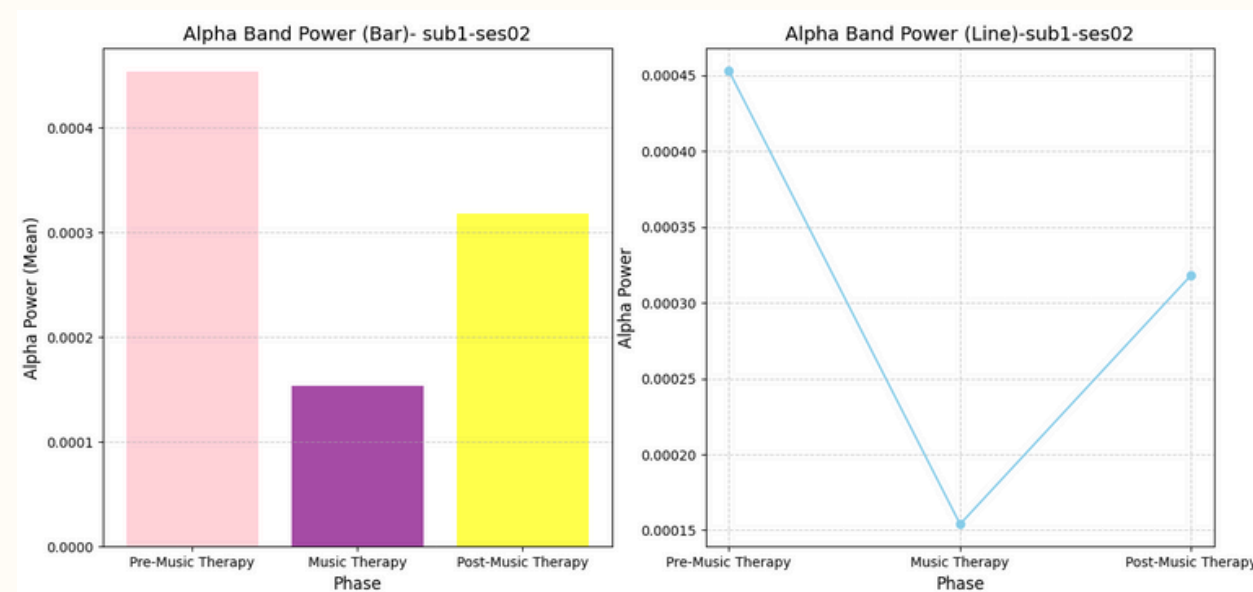
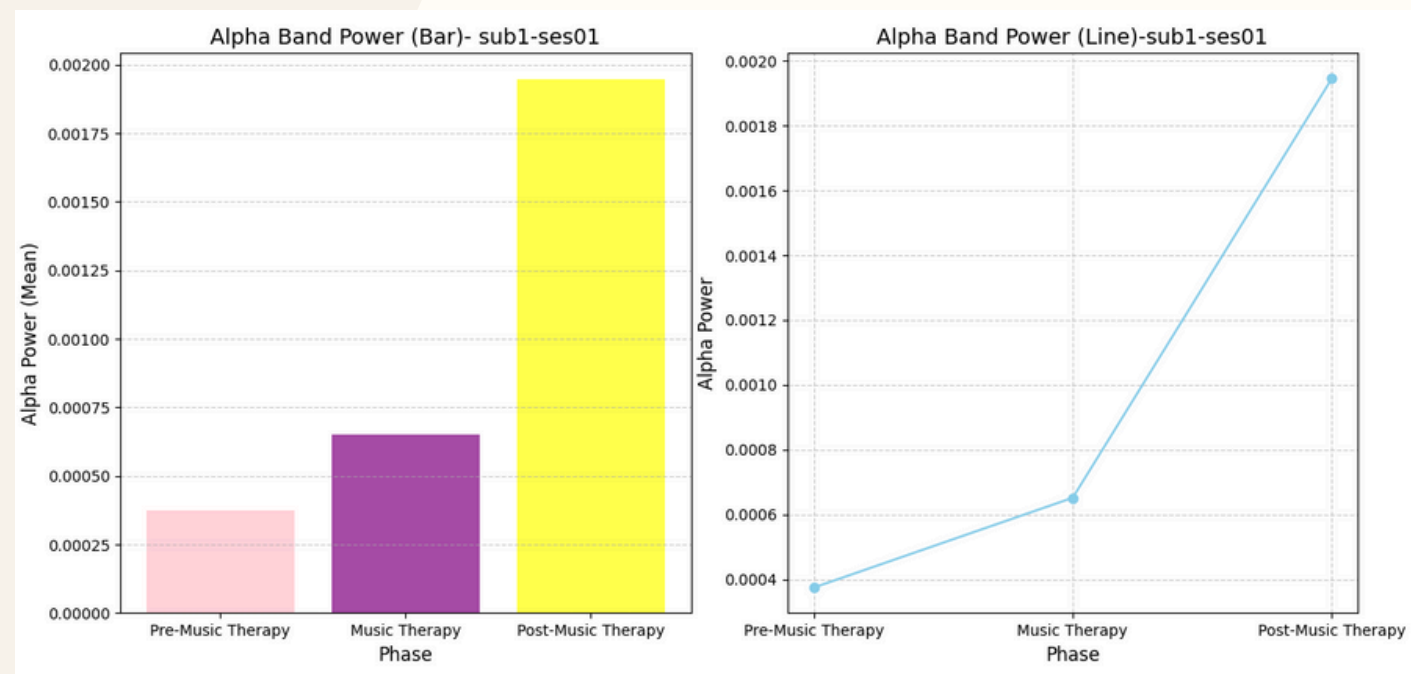


# Process

1. Collecting data
2. Relevant libraries
3. Coding... :)

# Result

The analysis exposed a significant change in alpha power between pre and post-music therapy phases. The T-statistic was -2.38, and the P-value was 0.031(Figure 2), which indicates that the difference in alpha power between the phases is statistically significant at the 0.05 level.



# Conclusion

These results suggest that listening to music might increase relaxation, as reflected in the changes in alpha power, although individual variations were present

