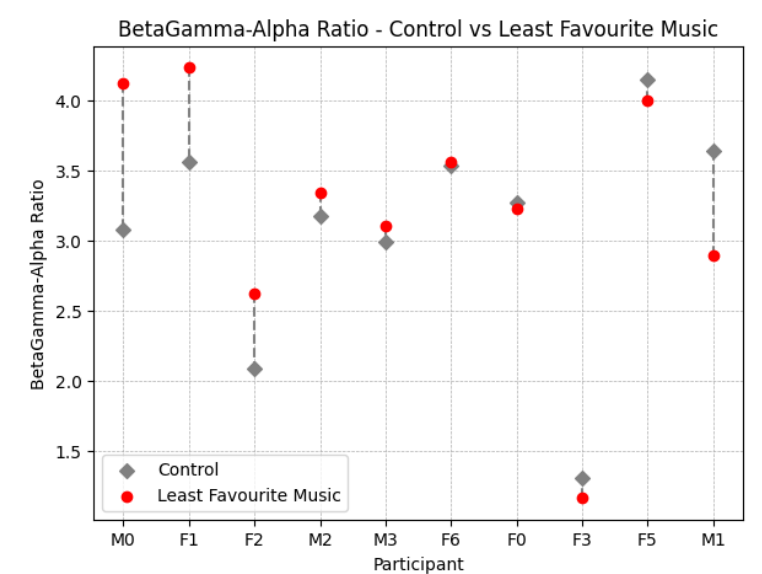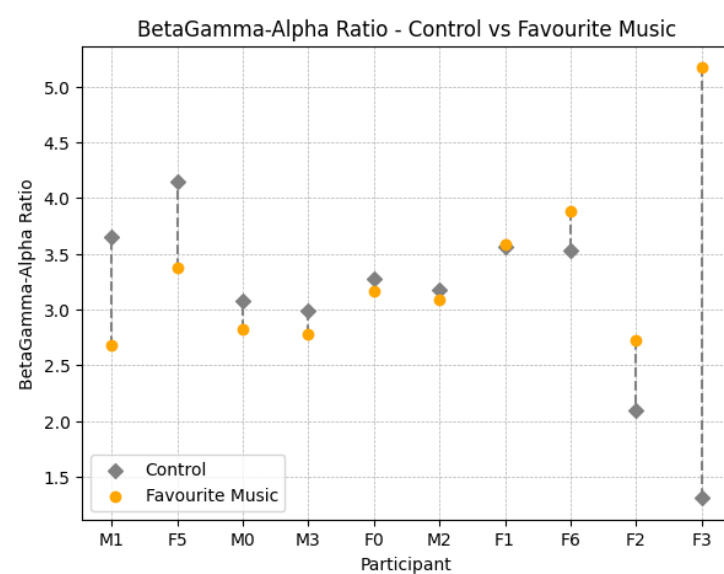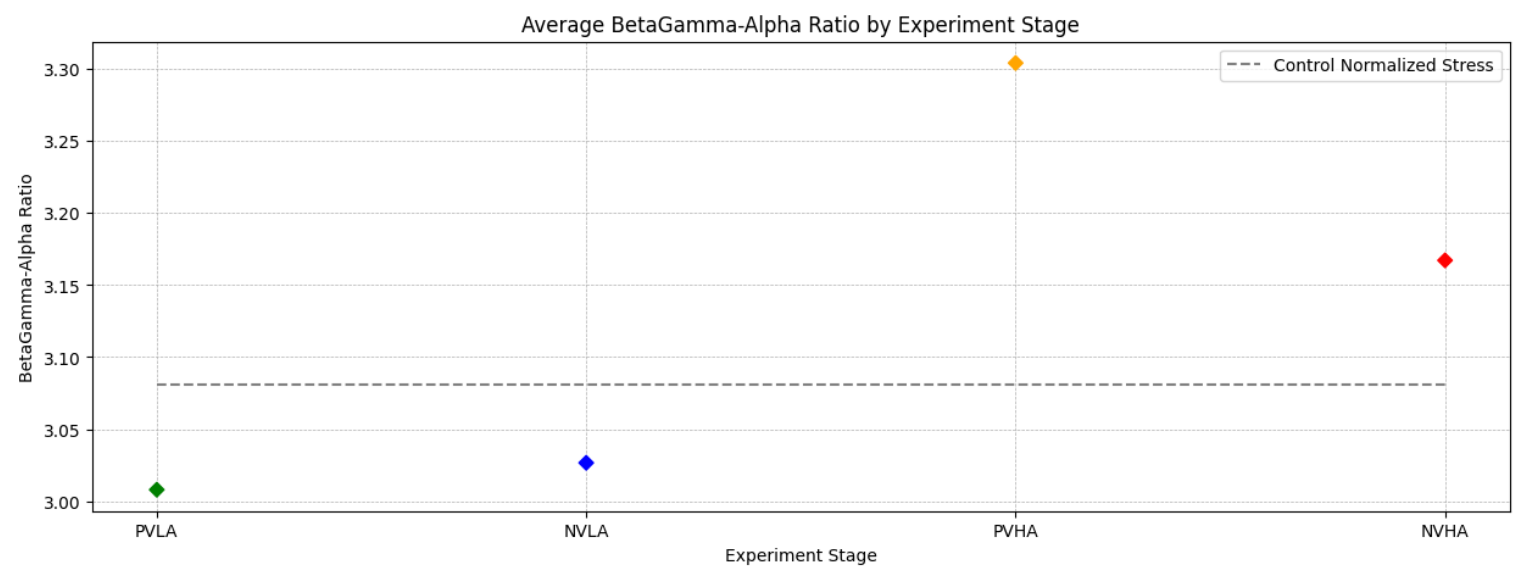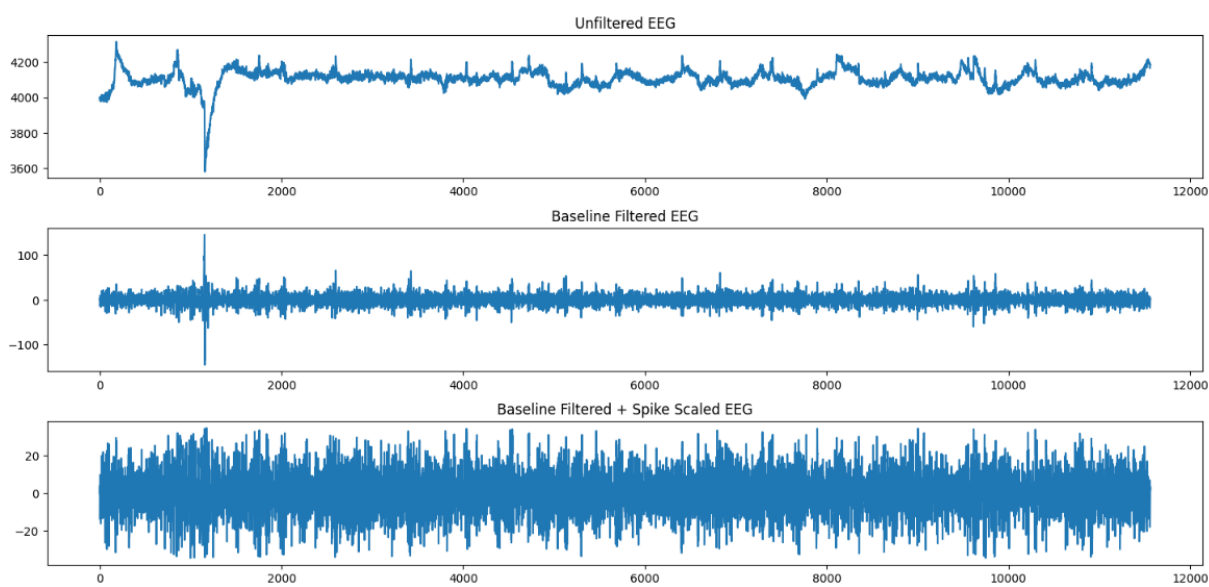# Exploring Music's Impact on Stress Levels Through EEG Analysis

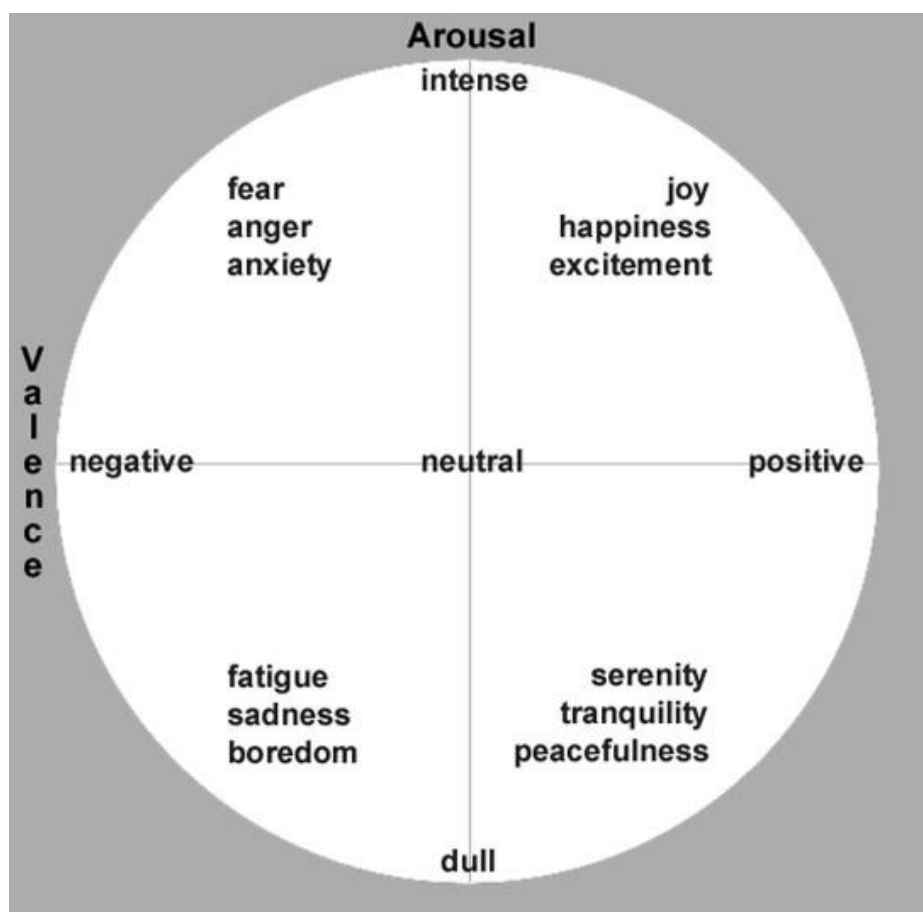Student: Ong Meng How Ryan   Supervisor: Dr Smitha K G

Average BetaGamma-Alpha Ratio by Experiment Stage

Unfiltered EEG

Baseline Filtered EEG

Baseline Filtered + Spike Scaled EEG

BetaGamma-Alpha Ratio - Control vs Favourite Music

BetaGamma-Alpha Ratio - Control vs Least Favourite Music

Project Objectives:

This project aims to investigate the impact of music's valence (emotional content) and arousal (energy level) on stress during stressor exposure, using physiological responses through Electroencephalogram (EEG) analysis alongside with subjective responses. Amid rising concerns about stress levels and their health effects, this project explores the potential of music as a real-time stress mitigation tool, identifying the key characteristics that helps to achieve optimal stress reduction.

Valence-Arousal Model

Experiment Stressors

Press 'Start' to begin the test

Total Score = 0 Time Left = 89 secs

Start

Select the option that matches the COLOUR of the words

Orange   Yellow   Black   Green

○ Orange Yellow Black Green
○ Red Grey Brown Blue
○ Red Grey Black Green
○ Red Grey Brown Green

Select the option that is the answer to the equation

$8 - 10 * 8$

○ -72
○ -71
○ -74
○ -16

Next   Next

Scoring: Correct +2 | Wrong -1 | No Answer -2

Wrong = ▮ | No Answer = ▮ | Blocked = ▮