Sophia Mehdizadeh

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EDUCATION

Georgia Institute of Technology   Atlanta, GA
Ph.D. in Music Technology, *Brain Music Lab*   Dec 2025
- Relevant Coursework: Music Perception & Cognition, Neuroimaging, Neural Systems Networks & Behavior, Statistical Modeling & Regression, Audio Software Engineering

M.S. in Music Technology, *Brain Music Lab*   Dec 2021
- Thesis: Using Music to Modulate Emotional Memory
- GPA: 4.00 / 4.00

University of Michigan   Ann Arbor, MI
B.S.E. in Electrical Engineering, Music Minor   Apr 2018
- GPA: 3.35 / 4.00
- Concentration: analog/digital signal processing, analog circuit design/analysis

PROFESSIONAL EXPERIENCE

Georgia Institute of Technology, School of Music   Atlanta, GA
Graduate Research Assistant, Brain Music Lab   Jan 2020 – Present
- Design and conduct human-subjects research to study interactions of music, mood, and memory
- Perform signal processing and statistical analysis of multimodal datasets, including physiological data
- Research new experimental paradigms for synchronous multi-person data collection (hyperscanning) to study empathic interactions

Mitsubishi Electric Automotive America   Northville, MI
Audio Engineer, Advanced Development   June 2018 – Jan 2020
- Managed custom interior electrical and mechanical modification of Consumer Electronics Show demo vehicle
- Performed ITU-T hands-free parameter tuning for infotainment production projects
- Communicated with customers, 3rd party suppliers, and team members locally and internationally

PROJECT AND LEADERSHIP EXPERIENCE

"Global Pandemic:" An EEG Biofeedback Performance Piece   Atlanta, GA
Technical & Production Lead   January – May 2022
- Designed a modern rendition of David Rosenboom's piece "Chilean Drought" using MaxMSP, Focusrite, and OpenBCI software and hardware
- Managed and communicated a team of 9 performers, rehearsing one-on-one and in groups in preparation for final concert showcase

Women in Music Technology @ Georgia Tech   Atlanta, GA
Treasurer & Chartering Leader   Aug 2021 – Present
- Create a community for women to network and find support as a minority in the academic and professional field of Music Technology
- Acquire funding and manage organization budget and spending

CONFERENCES & PUBLICATIONS

Yiren Ren, Sophia Mehdizadeh, Thackery Brown, and Grace Leslie. 2022. "Using Music to Modulate Human Emotional Memory." 2022 Biennial Meeting of the Society of Music Perception and Cognition (SMPC '22), August 4-7, Portland, OR, USA.

Thiago Roque, Neha Rajagopalan, Saksham Jain, Sophia Mehdizadeh, and Grace Leslie. 2022. "Multimodal, Musical Hyperscanning to Promote Empathy in HCI." Empathy-Centric Design At Scale Workshop at CHI 2022, April 26, 2022, Virtual Event.

Sophia Mehdizadeh and Grace Leslie. 2021. "Novel Methodologies for Secondary Analyses of Physiological and Musical Preference Data." International Conference on Music Perception and Cognition (ICMPC '16), July 28-31, Virtual Meeting.

AWARDS
- CABI MRI seed grant recipient (*Using Music to Modulate Emotional Memory*)   Apr 2021
- Winner of 2021 Moog Music Hackathon (*Magnebacus*)   Feb 2021

SKILLS

Computer Applications
- MATLAB, C/C++, Python, JUCE, Visual Studio, Minitab, SPSS, R
- Ableton, Logic, Reaper, MaxMSP, ChucK
- Microsoft Office (Word, Excel, PowerPoint)

Research & Experimental Design
- ECG, PPG, respiration, EMG, EEG, temperature, GSR, fMRI
- PsychoPy, AFNI, EEG Lab, SPM12, OpenBCI

Electronic Test/Measurement Equipment
- Digital Multimeter, Oscilloscope, Function Generator

Design, Fabrication & Prototyping
- Basic shop tools, Mill, Lathe, Laser Cutting, 3D Printing, Soldering, Arduino, Raspberry Pi
- PCB design (Eagle, Altium), CAD (SolidWorks, AutoCAD)

Languages
- Fluent in Greek, moderate knowledge of Spanish