Akshada Bandekar

asb329@miami.edu | Mobile: (786) 930-7061 | akshada-audio.com Coral Gables, FL 33146

Profile

Music Engineering graduate student with a Bachelor's degree in Electronics Engineering, possessing a diverse background in digital signal processing, audio electronics, embedded systems, audio machine learning and programming as well as music performance, recording and music production.

Work Experience

Audio Engineering Co-op

Motorola Solutions, Inc. - Plantation, FL

- Developing innovative lab automation techniques for efficient device testing
- Conducting extensive audio lab tests, participating in certification tests to ensure industry standard compliance
- Improving the summer intern project by adding more features to increase user engagement

Audio Engineering Summer Intern

Motorola Solutions, Inc. - Plantation, FL

- Developed a python-based desktop application 'ABX' to automate lab tests for noise reduction algorithms
- Documented internal noise suppression algorithm variables and their impact on radio device operation, providing valuable reference material for future projects

Music Technology Mentor

Donna E. Shalala MusicReach Program, University of Miami - Coral Gables, FL

- Constructed lesson plans, mentored students in music production and mixing using Digital Audio Workstations
- Maximized student participation and provided individual assistance, enhancing learning outcomes

Live Sound and Recording Apprentice, Video Engineer

Recording Services, University of Miami - Coral Gables, FL

- Executed sound reinforcement duties live concert multi-track recording, professional audio equipment set-up
- Managed camera setup, filming and live-streaming of concerts as video engineer

Education

University of Miami

Master of Science (M.S.) in Music Engineering Technology (in progress) GPA 3.9/4.0 (Fall '21, Spring '22 and Fall '22 Semesters)

Goa University

Bachelor of Engineering (B.E.) in Electronics and Telecommunication GPA 3.6/4.0

Skills

- **Software Development:** MATLAB, Python, C/C++, Objective-C, Assembly language
- Machine Learning Technologies: Tensorflow, Keras, PyTorch, Scikit-learn, Deep Learning
- DAWs: Adobe Audition, Logic Pro, Ableton, Pro Tools, FL Studio, Audacity, Sequoia
- Network Technologies: Dante (Level II certified), Cisco Packet Tracer, Socket Programming, Wireshark
- Tools: Visual Studio, Xcode, Anaconda-Navigator, Spyder, PyCharm, JUCE, Jupyter Notebook, Google Colab

Relevant Projects

Master's Research Project - Thesis Topic: Using Convolutional Neural Networks to improve Vocoded Speech The long-term goal of this research is to improve perceptual speech quality in vocoded signals of digital radio communication systems by using a machine learning post-processing algorithm without modifying the vocoder.

Keyword Recognition in Speech using Machine Learning: Designed and implemented a 2D CNN Model to detect certain keywords in recorded speech files by using MFCCs

Audio Effect Plugins in RackAFX and JUCE: Developed audio effect plugins like Bass Enhancer, Stereo Expander and Stereo Delay, Reverb, EQ and Filter plugins using C++

Transport Protocol: Designed and developed a reliable transport protocol using stop-and-wait and selective repeat Voice Activity Detection in Noise Using Deep Learning: Documented changes in model results by modifying different aspects of training and classification in MATLAB

Loudspeaker Parameter Calculator: Developed a MATLAB app to auto-calculate T-S Parameters from a few given values in loudspeaker spec sheet and plot graphs for infinite baffle, closed and vented box scenarios

Scholarships, Awards and Affiliations

- Audio Engineering Society Educational Foundation Scholarship Emil Torick Award 2021
- Audio Engineering Society and Arup Diversity in Audio Scholarship to attend AES New York Convention 2022
- Frost School of Music Graduate Student Merit Grant
- Institute for Data Science and Computing Advanced Computing for Students Research Grant •
- Student Member Audio Engineering Society, GrammyU, Society of Women Engineers
- Founder UniHERse: United for HER Safety and Equality uniherse.com
- National Award for Individual Contribution to Society from President of India 2014 •

Aug 2022 - Present

May 2022 - Aug 2022

Aug 2021 - Apr 2022

Aug 2021 - Aug 2022

Coral Gables, FL May 2023 (Expected)

November 2020

Goa. India