Sam Smith

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Education

The University Of Michigan

Expected Graduation: May 2023
GPA: **3.51**/4.00

B. S. E. Computer Science - College of Engineering
Coursework: Data Structures & Algorithms, Discrete Mathematics, Programming and Data Structures.
B. S. Performing Arts Technology - Audio Engineering
Coursework: Acoustics and Psychoacoustics, Music Theory, Electronic Music Arrangement, Studio Recording and Production, Immersive Media Design.

Experience

Immersive Media Assistant -

Jan 2019 - Present

- Assisting Dr. Anıl Çamcı with research in ambisonics and motion capture systems.
- Researching the accuracy of ambisonic systems in acoustically imperfect spaces.
- Co-authored a quick-start manual for the usage of qualtrics motion capture system in combination with external applications such as Max/MSP.
- Designed a GUI for easy usage of ambisonic systems through the ICST ambisonic library.

Media Assistant I

Sep. 2019 - Present

- Instructed training sessions twice a week for the certification of students in the duderstadt studio spaces.
- Assisted large recording sessions for student and staff projects (setting up mics, routing signal etc.).
- Worked with digital and analog recording technology including audio network systems such as DANTE.

Projects

Please visit my website for more project information and demos: sdsmit.github.io.

FeedBack - PAT 451 Project

April 2020

- Created a multimodal instrument inspired by eclectic audio/visual equipment: ultimately exploring human interaction with media interfaces in a creative setting.
- Built using Max/MSP for sound design and data managment.
- Designed a reactive animation system in processing.
- Created an interaction model to amplify the effects of data loops within the system.

Sonic Surfer - PAT 451 Project

Mar. 2020

- Created a multimedia game which integrated spatial audio and unique tacticile human-computer interaction which showed the viability of non-visual game expereinces.
- Created a controller with force sensing resistors on a platform to detect where the player was leaning.
- Built using Max/MSP for digital synthesis, binaural audio processing, and data processing.

Tweet Sonifier - EECS 183 Final Project - 1st place (out of 300)

Dec. 2018

- Created a program to express tweets in the form of audio: ultimately exploring a future of sonification in the age of data.
- Built in Python with PyAudio and Tweepy.
- Utilized Fast-Fourier Transforms and natural language processing to sonify text.

Audio/Visual Resampler - Music Makethon - 1st place (out of 3)

Nov. 2018

- Created a program to create new audio visual expereinces which showed a possibility of audio reactive visuals in a live performance setting without traditional video editting and animation processess.
- Built using C++ and JUCE for audio processing and Max/MSP for video processing.
- Featured in EECS department newsletter.

SimpleDelay - Independent Project

Aug. 2020

- Created an open source tape delay plug-in with simple controls built in C++/JUCE.
- Implemented a cirrcular buffer to handle delay signal and implemented a soft-clipping algorithm.

Skills

Great With: C++, Python, Audio Engineering, Max/MSP, Git.

Good With: PortAudio, Sound Design, Processing/P5.js, Java, Javascript, JUCE.

Familiar With: Protools, HTML, CSS, Unity.

Leadership

Audio Engineering Society U-M Student Section - Vice Chair

Jan. 2019 - Present

- Organized logistics of annual Mix/Remix competition including securing sponsorships from companies such as Ableton, Avid, and Shure.
- Applied for funding from the international AES organization and UofM student goverenment for a cable-building workshop, a networking event, and to attend the national conference. Funding totaled over $1000.
- Worked with UofM faculty to judge Mix/Remix and instruct a cable building workshop. Participation between the events totaling over 40 students.