# Sam Smith

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## Education

**The University Of Michigan**
Expected Graduation: May 2023

**B. S. Performing Arts Technology** - Audio Engineering
**B. S. E. Computer Science** - College of Engineering
Current GPA: **3.51**/4.00

Coursework: Studio Recording and Production, Data Structures & Algorithms, Discrete Mathematics, Music Theory, Acoustics and Psychoacoustics, Electronic Music Arrangement, Immersive Media Design.

## Experience

**Immersive Media Assistant**
Jan 2019 - Present

- Assisted Dr. Anīl Çamci with research in ambisonics and motion capture systems.
- Co-authored a quick-start manual for the usage of qualtrics motion capture system in combination with external applications such as Max/MSP.
- Designed an interface for easy usage of ambisonic systems through the ICST ambisonic library.
- Researching the accuracy of ambisonic systems in acoustically imperfect spaces through a user system. This project used Max/MSP, ICST ambisonics library, Javascript, and Qualisys Motion Capture System.

**Media Assistant I**
Sep. 2019 - Present

- Instructing training sessions for the certification of students in the duderstadt studio spaces.
- Experience assisting large recording sessions for student and staff projects (setting up mics, routing signal etc.).
- Experience working with digital and analog recording technology including audio network systems such as DANTE.

## Projects

**FeedBack** - PAT 451 Project
April 2020

- Created a multimodal instrument inspired by eclectic audio/visual equipment and the acoustic phenomenon, feedback.
- 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.
- Ultimately explored human interaction with media interfaces in a creative setting.

**Sonic Surfer** - PAT 451 Project
Mar. 2020

- Created a multimedia game which integrated spatial audio and unique human-computer interaction.
- Built using Max/MSP for digital synthesis, binaural audio processing and data processing.
- Created a interface that allows for gameplay without visual cues.
- Ultimately showed the viability of non-visual game expereinces.

**Great Green Room** - Independent Project
Nov. 2019

- Created a self written, produced, and engineered jazz rock album.

**Tweet Sonifier** - EECS 183 Final Project - 1st place
Dec. 2018

- Created a program to express tweets in the form of audio.
- Built in Python with PyAudio and Tweepy.
- Utilized FFT analysis and natural language processing to sonify text.
- Ultimately explored a future of sonification in the age of data.

**Audio/Visual Resampler** - Project Music Makethon 2018 Project - 1st place
Nov. 2018

- Created a program to create new audio visual expereinces based on the live performance of a musician.
- Built using C++ and JUCE for audio processing and Max/MSP for video processing.
- Ultimately showed a possibility of audio reactive visuals in a live performance setting without traditional video editting and animation processess.

**For more project information and demos visit my website, sdsmit.github.io.**

## Skills

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

**Good With:** PortAudio, Sound Design, Processing, Java, Javascript.

**Familiar With:** JUCE, Protools, HTML, CSS, Unity.

## Organizations

**Audio Engineering Society U-M Student Section -** Vice Chair
Jan. 2019 - Present

- Experience organizing financials and logistics of Audio Engineering Society events and competitions.

**Men's Glee Club -** Member
Sep. 2018 - Present

- Singing a variety of choral repetiore in a large setting and engaging with the community in both musical and non-musical settings.