Jatin Chowdhury
Audio Signal Processing Engineer

✉ jatin@ccrma.stanford.edu | ⌂ ccrma.stanford.edu/ jatin | ⬡ jatinchowdhury18 | ⬡ jatinchowdhury18

Education

Stanford University, Center for Computer Research in Music and Acoustics *Palo Alto, CA*
M.A. in Music, Science, and Technology *Sept. 2018 - June 2020*
- Denning Family Fellowship for the 2018-2019 academic year.
- Relevant Coursework: Advanced Digital Signal Processing, Machine Learning, Spatial Audio, Music Recording.
- Research: Nonlinear Signal Processing, Virtual Analog Modelling, Modal Signal Processing.

University of Southern California *Los Angeles, CA*
B.S. in Electrical Engineering, Physics (Minor), Music Recording (Minor) *Aug. 2014 - May 2018*
- USC Presidential Scholarship, USC Renaissance Scholar
- Relevant Coursework: Signal Processing, Circuit Design, Digital Logic, Electromagnetics, Software Design.

Experience

Chowdhury DSP *Denver, C0*
Audio Signal Processing Engineer *Oct. 2021 - PRESENT*
- Developed signal processing algorithms for real-time audio processing and synthesis.
- Contributed to open-source audio plugins and libraries.

Tesla Motors *Palo Alto, CA*
Audio Test Engineer *Aug. 2020 - Oct. 2021*
- Developed audio system signal flow layouts for vehicles using AudioWeaver.
- Developed end-of-line tests to ensure vehicle audio system quality using Python and C++.
- Contributed to the signal processing and tuning for the vehicle pedestration warning speaker.
- Contributed to testing and validation software for audio system firmware.

Publications & Presentations

A Comparison of Virtual Analog Modelling Techniques *November 2020*
Audio Developer Conference *London, UK*
- Presented a virtual analog model of the Klon Centaur guitar pedal, developed using nodal analysis, Wave Digital Filters, and Recurrent Neural Networks.

Stable Structures for Nonlinear Biquad Filters *Sept. 2020*
Proc. of the 23rd International Conference on Digital Audio Effects *Vienna, Austria*
- Presented at the DAFx-2020 conference.
- Available on the DAFx Archives.

Real-Time Physical Modelling for Analog Tape Machines *Sept. 2019*
Proc. of the 22nd International Conference on Digital Audio Effects *Birmingham, UK*
- Oral presentation at the DAFx-2019 conference.
- Available on the DAFx Archives.

Skills

Programming Languages C/C++, Python, Bash, MATLAB, Faust, LaTex, Rust, Javascript
Tools/Frameworks Linux CLI, Visual Studio, Xcode, CMake, Git, GitHub Actions, JUCE API

Projects

Chowdhury DSP
Founder, Engineer *June 2018 - PRESENT*
- Developed audio plugins including tape emulation, phaser effects, distortion, and delay matrix effects.
- Contributed audio effects and other DSP code to the open-source Surge Synthesizer project.

NoLava Recording Studios *Los Angeles, CA*
Co-Founder, Audio Engineer, Technical Advisor *Aug. 2017 - July 2018*
- Recorded, mixed, and mastered for artists of various styles including acoustic, electronic, rock, country, and punk.
- Installed, repaired, and maintained speakers, microphones, keyboards, amplifiers, and other musical equipment.