

Jatin Chowdhury

Audio Signal Processing Engineer

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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

Tesla Motors

Palo Alto, CA

AUDIO QA INTERN

April 2020 - June 2020

- Developed end-of-line tests to ensure audio system quality for vehicles coming off the production line.
- Developed signal processing methods for detecting audio system defects using a sine sweep measurement.
- Ported existing audio tests written in Python to C++ for improved performance.

Persp3ctive VR

Los Angeles, CA

SOFTWARE/DSP ENGINEER

June 2019 - PRESENT

- Developed audio effects for use in a VR audio production environment including a 10-band EQ and a compressor.
- Built DSP framework for integrating effects made by other engineers into the plugin.
- Implemented OSC communication for sharing parameters and metering data with VR headset.

Audioworks Technologies

Toronto, ON

SOFTWARE ENGINEER

July 2018 - Dec. 2018

- Member of the SoundsUnite development team: building a digital audioworkstation (DAW) using JUCE/C++.
- Developed and implemented DSP, UX, and file management features for the application.

Publications & Presentations

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: <http://ant-s4.unibw-hamburg.de/dafx/paper-archive/>.

The CHIME Fast Radio Burst Project: System Overview

Aug. 2018

THE ASTROPHYSICAL JOURNAL

Vol. 836, No. 1

- Co-authored with the CHIME/FRB Collaboration
- Available on the arXiv: <https://arxiv.org/abs/1803.11235>.

Skills

Programming Languages

C/C++, Python, MATLAB, Faust, LaTeX, Javascript

Tools/Frameworks

Linux CLI, Visual Studio, Git, Travis CI, JUCE API, Audio Plugins, Inno Setup

Projects

Chowdhury DSP

FOUNDER, ENGINEER

June 2018 - PRESENT

- Developed audio plugins including tape emulation, phaser effects, distortion, and delay matrix effects.
- Designed and developed NewMixer, a unique and revolutionary audio mixing tool.

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.