

ETHAN JACOB GELLER

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SUMMARY

- DSP/Audio engineer, music producer and composer.
- Long term professional goals:
 - Create a performant and reliable implementation of spatial audio for virtual reality and games.
 - Continue research in acoustic physical models for head related transfer functions.
 - Be part of a team of intelligent and enthusiastic people.

WORK EXPERIENCE

DOLBY LABORATORIES, San Francisco, CA

Engineer, Dolby Atmos for Virtual Reality Applications *Jul 2016-present*

- Primary engineer on a C++ library for decoding Dolby Atmos content and rendering it to a binaural signal based on head rotation.
- Develop and maintain example integrations with OpenSL (Android NDK), CoreAudio (iOS/macOS), WASAPI (Windows).

SONY COMPUTER ENTERTAINMENT AMERICA, San Mateo, CA

Audio Engineer, Research and Development *Sept 2015-Mar 2016*

- Worked on audio implementation for Playstation VR as well as middleware integration

Audio Engineering Intern *June-Sept 2015*

CRITTERCISM, San Francisco, CA

Engineering Intern *May-Aug 2014*

- Implemented automated regression test suite in Python, including Selenium-based front end tests
- Implemented one-step automated packaging and distribution to Maven Central and Cocoapods for engineering team, as well as Swift crash reporting and name de-mangling

ADVANCED VISUALIZATION LAB, Indiana University, Bloomington, IN

Electronics Intern *Nov 2013-May 2014*

- Helped implement audio for *Hardwired* by Margaret Dolinsky using Arduino for pitch detection and MIDI-driven synth

EDUCATION

STANFORD UNIVERSITY, Center for Computer Research in Music and Acoustics (CCRMA)

June 2016

M.A. in Music, Science and Technology

Relevant Coursework:

- Introduction to the DFT
- Introduction to Digital Filters
- Signal Processing for Digital Audio Effects
- Physical Audio Signal Processing
- Machine Learning
- Music Computing Design I: Software Paradigms for Computer Music
- Music Computing Design II: Software Paradigms for Mobile Music
- Physical Interaction Design for Music
- Neuroplasticity, Music and Games

INDIANA UNIVERSITY, BLOOMINGTON

May 2014

B.M. in Composition, Percussion Performance With Minor in Computer Science

ACADEMIE AT IRCAM, Paris, France

June 2013

Month-long course in DSP and computer music at the Institut de Recherche et Coordination Acoustique/Musique.

- Studied audio synthesis, processing and analysis with Tom Mays and Jean Lochard

SO PERCUSSION SUMMER INSTITUTE, Princeton University, Princeton, NJ

June 2011

Two-week summer percussion workshop with renowned percussion ensemble So Percussion.

- Performed for and alongside So Percussion, Dan Deacon, and various composers at Princeton University

EUROPEAN AMERICAN MUSIC ALLIANCE, Paris, France

July 2010

Music theory and counterpoint workshop with Dr. Philip Lasser, Michael Merlet, and Narcis Bonet.

- Studied theory and counterpoint in La Schola Cantorum

SKILLS

- Proficient in Matlab, Faust, MaxMSP, ChucK, and Adobe Soundbooth/Audition
- Strong with FMOD and Wwise, experience both using UE4 and interacting with it's codebase
- Experience using Unity for virtual reality projects
- Languages, from most proficient to least: C++, C, Objective C, Javascript, Python, PHP/ MySQL, Swift, and Scheme

PROJECTS

Source available at github.com/felakuti4life:

- PhonyPickupVR: *Audio-driven puzzle game for the Oculus Rift DK2.*
- Squeak: *Text adventure that uses binaural room impulse responses in a randomly generated murder mystery*
- SqueakEngine: *C++ audio engine that allows for audio-thread driven timing, thread-safe messaging and various effects such as FFT convolution*
- Lewp: *Socially-driven loop pedal for iOS.*

Available for download at ethan.audio/tech:

- Seismokraft (seismokraft.com): *Earthquake sonification using the Web Audio API*
- Soundwrite: *Audio synthesis from text input*
- Wind Machine: *Stereophonic wind emulation from motion tracking for .mov files*
- Sounden Crypt: *.WAV rolling XOR encryption and decryption*

REPORTS

- *Using ASM.JS for More Stable DSP*, for Centre National de Création Musicale (GRAME). Presented July 2013.
- *Intuitive Earthquake Sonification with the Web Audio API* for the Web Audio Conference (IRCAM, Mozilla). Presented January 2015.
- *Weakly Supervised Modeling of Animal Sounds*, with Robert Colcord and Matt Horton for CS 229 (Machine Learning). Presented December 2015. Available at ccrma.stanford.edu/~ethan/229

AWARDS

Finalist, IDEA Competition 2012 Kelley School of Business, Indiana University

Blue Ribbon Recipient, Opus Composition Festival, Indiana Music Teachers Association, Bloomington, IN, 2011

Recipient, Interlochen Fine Arts Honors Award for Percussion, 2008

Recipient, Arline Diamond Long Island Composers Award, 2009