Paul Mayer

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Education:

Rice University, Houston, TX
<u>Bachelor of Science in Electrical Engineering</u>, Magna Cum Laude
Graduated: May 2018
GPA: 3.94
Honor Societies: Tau Beta Pi, Eta Kappa Nu, President's Honor Roll
Relevant Coursework: Digital Signal Processing, Digital Logic Design, Signals Systems and Machine
   Learning, Data Science
Computer Skills: C, C++, Objective C, Python, Pytorch, Java, SQL, Matlab, Unix, Verilog

Research Experience:

Rice University ECE PhD Student – Fall 2018-Present
- Published work in machine learning theory and overparameterization
- Studied diffusion models for inverse imaging tasks, superresolution

Digital Cure for Epilepsy - Fall 2016-2018
- Developed seizure prediction algorithm using EEG Data collected via subdural electrodes
- Implemented prediction algorithm on FPGAs and SoMs (System on Modules)

Work Experience:

Audrobe Inc – Houston, TX
CTO, Spring 2019-Present
- Invented patented system for wireless real-time control of lighting and haptics
- Designed haptic suits for use by participants in live music venues

Intel Digital Signal Processing Engineer – San Jose, California
Intern, Summer 2016-2018
- Wrote lightweight DSP & linear algebra libraries in C/C++ for use on FPGAs
- Synthesized custom filters into RTL and programmed bitstreams to hardware
- Implemented variant of the Chirp-Z transform to perform efficient FFTs of arbitrary lengths

Teacher at Rice University – Houston, TX
Teacher, 2015-present
- Created COLL 119 – Intro to Computer Music, COLL 140 – Intro to Music Production
- Developed lesson plans, recorded videos, and wrote articles relevant to student knowledge
- Winner of the George R Brown Teaching Award in 2018-2019
- TA and lecturer for Intro to Machine Learning, Fundamentals of Electrical Engineering

Mobile DJ – Bakersfield, CA and Houston, TX
DJ and owner, 2013-present
- Perform live for crowds over 5000
- Collaborate with event coordinators, performers, and promoters at nightclubs and venues
- Program large-scale audio systems, intelligent lighting, and integrated video systems

Audio Engineer – Houston, TX
Music Producer, 2010-present
- Worked with artists and vocalists in the studio for recording and post-production
- Recorded and uploaded videos on audio synthesis and sound design
- Integrate analog and digital synthesizers with MIDI and AI-based mixing and mastering tools

Activities

Boy Scouts – Eagle Scout (250-hour service project)