

Education

Stanford University, Stanford CA

M.A in Music, Science, and Technology

April 2013

- Computer Science paradigms for audio/music applications, algorithmic music, musical user interfaces, audio synthesis techniques
- GPA: 3.86

Rensselaer Polytechnic Institute, Troy NY

B.S. in Computer Science, Minor in Electronic Arts

May 2011

- Data structures, algorithms, programming languages, computer architecture, models of computation, audio/media technology
- GPA: 3.79

Interests

- music creation
- audio synthesis / generative music
- multimedia / interactive art & performance
- full-stack software design & development
- entrepreneurship
- lean thinking
- open source philosophies
- open standards
- mindfulness

Work Experience and Software Projects

Gray Area Creative Code Immersive (San Francisco)

Fall 2015

Teaching Assistant • Node.js • HTML / CSS • Arduino • Processing

- Helped students learn about technology for artistic expression
- Built interactive sound installation

Center for Computer Research in Music and Acoustics (Stanford University)

Spring 2015

System Administrator • Linux • KVM

- Virtual Machine provisioning, configuration, migration from old server infrastructure (web server, email server, file servers)
- Implemented web-based administrative software to replace old solutions

Samsung NExD (San Francisco)

Fall 2014

Web Software Developer • JavaScript (React.js, Redux) • C++ • AWS

- Implemented next generation large screen and IoT UI prototypes on quick iteration schedule
- Tightly integrated with existing prototypes, collaborating with engineers, UX / industrial designers

Musikara (Oakland, CA)

2013

Musical Creation Software • Co-founder • Business / Software Development • Meteor.js • Web Audio API • Python • AWS

- Designed and implemented intelligent music analysis & recommendation engine, frontends for music creation and collaboration

Gracenote (Emeryville, CA)

Summer 2012

Media Technology Lab Research Intern • JavaScript • WebGL (Three.js) • Web Audio API • Python (Flask, Celery) • iOS (Cocos2D)

- Built an interactive iPad app for fun media discovery, a web-based MIR visualization tool, and a REST service that integrates with existing feature extraction tools

tulpasynth (github.com/colinsullivan/tulpasynth)

Fall 2011

Web-based collaborative instrument • C++ • Synthesis ToolKit • Node.js • Backbone.js • SVG • Objective-C • iOS • OpenGL

- Web-based MVC application in-browser, followed by more fully-featured iOS application
- Designed interaction and sound, sounds synthesized from scratch in C++
- Web-based multiplayer state synchronization in browser and iOS

Concert (github.com/concertsoundorganizer/Concert)

Jan 2010 – Fall 2011

Web-based Audio Organizer • Python • Django • REST API • JavaScript • HTML5 • CSS3 • Backbone.js

- Led team of students to architect, design and develop an open source application in an agile manner
- Architected and implemented frontend JavaScript framework (MVC) and REST API backend

Algorithmic Music Composition with the Fibonacci Sequence (colin-sullivan.net/fib)

2010

Independent Study with Prof. Curtis Bahn • Max/MSP • JavaScript • Logic

- Developed a musical composition by algorithmically generating material based on the Fibonacci sequence and Golden Ratio
- Conducted research on the history of algorithmic music composition and documented work in research paper

IBM (Austin TX & San Jose CA)

Spring 2010, Summer 2011

Extreme Blue Intern, UI Development & User Experience Developer, Mobile UI Development

- Led development of visualization tool for large-scale geographic data (RaphaelJS, Google Maps API, IBM service) on an agile team
- Presented project to numerous IBM executives including to CEO Sam Palmisano
- Architected and developed a prototype mobile application using HTML5 standards and PhoneGap
- Reported on stability of various HTML5 mobile features given IBM's desired feature set to guide IBM's (I.M.) mobile strategy

Synthetic Cinema International (Rocky Hill CT)

2007 - 2010

Rotational Intern, Video Editor, Audio Recording Engineer, Audio Editor, Systems Support, Web Developer