

Education

- Stanford University** 2013
M.A in Music, Science, and Technology
- Computer Science paradigms for audio/music applications, algorithmic music, musical user interfaces, audio synthesis techniques
 - GPA: 3.86
- Rensselaer Polytechnic Institute, Troy NY** 2011
B.S. in Computer Science, Minor in Electronic Arts
- Data structures, algorithms, programming languages, computer architecture, models of computation, audio/media technology
 - GPA: 3.79

Interests

- enabling artists
- music creation
- audio synthesis / generative music
- multimedia / interactive art & performance
- full-stack software design & development
- web software stacks
- entrepreneurship & lean thinking
- design thinking
- open source philosophies
- open standards
- mindfulness practice
- beginner's mind

Jobs and Projects

- Dolby Laboratories** San Francisco
Sr. Prototyping Engineer • React.js • Redux • Python • Design Thinking • Linux Feb 2016 - Oct 2018
- Design thinking & lean startup processes with researchers, engineers, and product managers
 - Collaboratively conceive, scope, and implement experiential and technical feasibility prototypes
 - Leading implementation of hardware and software prototypes, running internal demos
 - Built and maintained in-house deep learning servers from bare-metal and web infrastructure from VMs
- Gray Area Creative Code Immersive** San Francisco
Teaching Assistant • Prototyping • Node.js • HTML / CSS • Arduino • Processing Fall 2015
- Facilitated students learning about technology for artistic expression
 - Built the Transdimensional Audio Workstation, an interactive sound installation: colin-sullivan.net/taw
- Center for Computer Research in Music and Acoustics** Stanford University
Linux System Administrator • KVM • Apache • Node.js Spring 2015
- Virtual Machine provisioning, configuration, migration from old server infrastructure (web, email, file servers)
 - Implemented web-based user on boarding system
- Samsung NExD** San Francisco
Web full stack developer • JavaScript (React.js, Redux) • AWS 2014
- Implemented large touchscreen and IoT prototypes on quick iteration schedule
 - Tightly integrated with existing prototypes, collaborating with engineers, UX / industrial designers
- Musikara** Oakland
Startup co-founder • Meteor.js • Web Audio • Python • AWS 2013
- Designed and implemented prototypes of music analysis & recommendation engines, UIs for music creation and collaboration
- Gracenote** Emeryville, CA
Media Technology Lab Intern • JavaScript • Three.js • Web Audio API • Python (Flask, Celery) • iOS (Cocos2D) Summer 2012
- Prototype iPad app for media discovery, a web-based MIR visualization tool, a REST service integrated with existing MIR tools
- tulpasynth** github.com/colinsullivan/tulpasynth Stanford University
Collaborative musical instrument • C++ • Synthesis ToolKit • Node.js • Backbone.js • SVG • iOS • OpenGL Fall 2011
- Web-based MVC application in-browser, followed by more fully-featured iOS application with C++ sound synthesis engine
 - Developed interaction, sound, and multiplayer state synchronization in browser and iOS
- Concert** github.com/concertsoundorganizer/Concert 2010 - Fall 2011
Web-based Audio Organizer • Python • Django • REST • JS/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 Spring 2010
Extreme Blue Intern, UI & UX Developer • RaphaelJS • Google Maps API • PhoneGap San Jose, CA Summer 2011
- Led small agile team development of visualization tool for large-scale geographic data leveraging IBM data services
 - Presented project to numerous IBM executives including CEO
 - Reported on stability of various HTML5 mobile features given IBM's desired feature set to guide IBM's mobile strategy
- Synthetic Cinema International** Rocky Hill, CT
Video Editor, Audio Recording Engineer, Audio Editor, Systems Support, Web Developer 2007 - 2010