

Colin Sullivan

Experimental Technologist

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Education

Stanford University, Stanford CA

M.A in Music, Science, and Technology

April 2013

- Computer Science paradigms for audio/music applications, algorithmic music, audio synthesis techniques, digital signal processing
- GPA: 3.86

Rensselaer Polytechnic Institute, Troy NY

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

May 2011

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

Interests

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

Work Experience and Software Projects

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

Spring 2015

System Administrator • Linux • KVM

- Provisioning and migrating VMs, replacing old server infrastructure
- Installing modern web tools in server ecosystem, managing storage clusters

Samsung NExD (San Francisco, CA)

Summer 2014

Web Software Developer • JavaScript • C++

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

Musikara (musikara.com)

2013

Musical Creation Software Startup • Co-founder • Software Design & Development • Engineering Management

- Designed and implemented intelligent music analysis & recommendation engine, frontends for music creation and collaboration
- Learned about business, startups, user research

Gracenote (Emeryville, CA)

Summer 2012

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

- 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/Concert/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

- Employed as an Audio Recording Engineer, Audio Editor, and Sound Designer for commercial clients and feature films
- Developed customized web-based audition management system, taught video production courses to publications and colleges

Services

Software Design & Development

- web, mobile, multimedia, audio
- full-stack: interactive to low level
- C++, Python, JavaScript, iOS, and many others

Sound Design & Engineering

- recording / synthesis / mixing
- fixed music, soundscapes / generative music content
- integration into existing systems & projects