

Colin Sullivan

Software developer of full-stack web and interactive systems

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Employment

Output

Remote

Staff Software Engineer / Lead Full Stack Engineer / Tech Lead • C++ • TypeScript • React / Redux

Jan 2022 - Current

- Led GUI development of Output Creator, established best practices and toolchain, from inception to market with small team
 - Co-led development of communication layer and dual Flux store in TypeScript / C++ dual process application
 - Led development of high performance React / PixiJS web GUI application, leveraging HTML/CSS vs. WebGL for performance
 - Presented this architecture work at Audio Developers Conference 2023
 - Developed session file versioning, enabling backwards compatibility and file schema migration for Creator users
 - Developed LLM features, enabling users to create a session with a prompt
- Led development of Output Co-Producer from private beta to market with small team
 - Led feasibility, prioritization, MVP scope and sprint planning for a team of client engineers and backend API developers
 - Collaboration with R&D developers to deploy LLM enhanced search APIs and DNN audio models to product backend API
 - Designed and implemented a web-served GUI, enabling Output to deliver updates to a DAW plugin with no installer
- Extensive code reviews, mentoring and lunch and learns, maintaining DevOps systems, complex build systems
- Documenting code quality initiatives: testing best practices, tooling standards, tech debt tracking and prioritization

Output

Remote

Contract Software Developer • React / Redux • GraphQL • C++ • Electron • DevOps

Feb 2020 - Jan 2022

- Built and shipped Output Hub 2.0, an Electron app for installing plugins and sample libraries on macOS and Windows
- Led Arcade browser 1.4 to completion, the first web GUI version of Arcade: a software music instrument with a Web GUI on a JUCE audio engine
- Led feasibility analysis of Output Creator GUI architecture and toolchain
- Contributing to DevOps & Process best practices

Stamen Design

San Francisco, CA

Contract Software Developer & Creative Technologist • React.js • D3.js • Pandas • Ansible • Linux

2019 - 2021

- Developed interactive touch screen data visualization experience with team of designer & developers for global corporate client
- Built data & visual explorations, engaged with internal teams and clients. Designed deployment infrastructure for Stamen.

Dolby Laboratories

San Francisco, CA

Staff Sr. Prototyping Engineer • React.js • Python • Max/MSP • Ansible • Raspberry Pi • Innovation Process

2016 - 2018

- Developed experiential and technical feasibility prototypes through concept, scoping and implementation
- Led design thinking & lean startup processes with researchers, engineers, and product managers
- Led implementation of multiple web-based UI prototypes and a physical Raspberry Pi prototype, ran internal demos
- Designed and maintained in-house deep learning Linux infrastructure from bare-metal servers and VMs

Center for Computer Research in Music and Acoustics

Stanford University

Contract 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, CA

Contract Software Developer • React.js • Redux • AWS

2014

- Implemented large touchscreen and IoT prototypes for quick design iteration
- Tightly integrated with existing prototypes, collaborating with engineers, UX / industrial designers

Musikara

Oakland, CA

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, built a web-based MIR visualization tool, built a web API to core MIR tools

Concert github.com/concertsoundorganizer/Concert

Troy, NY

- Project lead for web-based audio organizer tool

2010 - 2011

- IBM** Austin, TX / San Jose, CA
• Developed data visualization tool for large-scale geographic data. Feasibility studies of HTML5 to guide IBM's mobile tech strategy. 2010 - 2011
- Synthetic Cinema International** Rocky Hill, CT
• Video Editor, Audio Recording Engineer, Audio Editor, Systems Support, Web Developer 2007 - 2010
- Pyro/FX Entertainment Group** Hamden, CT
• Systems support & integration for synchronized computer-controlled pyrotechnics firing system 2006 - 2010

Education

Stanford University 2013
M.A in Music, Science, and Technology: Software for audio/music, signal processing & synthesis, algorithmic music & interfaces GPA 3.86

Rensselaer Polytechnic Institute 2011
B.S. in Computer Science, Minor in Electronic Arts: Data structures, computer architecture, 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 process
- design thinking
- open source
- open standards
- mindfulness practice
- beginner's mind