

Colin Sullivan

Software developer of full-stack web and interactive systems

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Employment

Output

Staff Software Engineer / Lead Full Stack Engineer

Remote
Jan 2022 - Current

- Designed GUI architecture of Output Creator, established best practices and toolchain
- Co-designed and implemented communication layer and state store in C++ host application
- Co-designed and implemented communication protocol and dual Flux store architecture between C++ application and Web GUI. Presented this architecture at Audio Developers Conference 2023 with Kevin Dixon.
- Led architecture and implementation of “version one” of the Creator UI
- Architected and implemented session file versioning, enabling backwards compatibility and file schema migration for Creator users
- Led architecture and implementation of “version two” of the Creator UI
- Architected and implemented MVP CoProducer prompt to starters feature for Creator, allowing users to create a session with a prompt.
- Extensive code reviews, mentoring and lunch and learns, DevOps and code quality initiatives

Output

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

Remote
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

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

San Francisco
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 team and client
- Implemented data processing components, application components, and Linux deployment infrastructure

Dolby Laboratories

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

San Francisco
2016 - 2018

- Developed experiential and technical feasibility prototypes through concept, scoping and implementation
- 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
- Built and maintained in-house deep learning Linux infrastructure from bare-metal servers and VMs

Center for Computer Research in Music and Acoustics

Contract Linux System Administrator • KVM • Apache • Node.js

Stanford University
Spring 2015

- Virtual Machine provisioning, configuration, migration from old server infrastructure (web, email, file servers)
- Implemented web-based user on-boarding system

Samsung NExD

Contract Software Developer • React.js • Redux • AWS

San Francisco
2014

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

Musikara

Startup co-founder • Meteor.js • Web Audio • Python • AWS

Oakland
2013

- Designed and implemented prototypes of music analysis & recommendation engines, UIs for music creation and collaboration

Gracenote

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

Emeryville, CA
Summer 2012

- Prototype iPad app for media discovery, a web-based MIR visualization tool, a REST service integrated with existing MIR tools

Concert github.com/concertsoundorganizer/Concert

Project lead for web application • Python • Django • REST • JS/HTML5/CSS3 • Backbone.js

2010 - 2011

- 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

IBM

Extreme Blue Intern, UI & UX Developer • RaphaelJS • Google Maps API • PhoneGap

Austin, TX Spring 2010
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

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

Rocky Hill, CT
2007 - 2010

Pyro/FX Entertainment Group

Systems support & integration for synchronized computer-controlled pyrotechnics firing system

Hamden, CT
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 thinking
- design thinking
- open source philosophies
- open standards
- mindfulness practice
- beginner's mind