

# COOPER BRISLAIN

## Synesthetic Visioneer • Creative Coder

3D and Software Engineer specializing in synthesizing value production techniques with real-time environment parameterization, seeking opportunities to enhance event immersion and experience.

### KEY SKILLS

Excellent written communication skills  
Lifelong learner  
Critical thinker  
Ability to conceptualize complex systems  
Adaptability and creative problem-solving skills  
Able to foresee potential future complications and constraints, designing for extensibility and scalability

### EXPERIENCE

#### Lighting R&D Engineer, Simple Machinists 2018

Collaboratively designed custom-fabricated parts for high-performance ARCTiX LED fixtures for intelligent stage lighting.  
Delivered 110 LED fixtures in time for use for installations at live events.  
Developed production, q/a, and asset tracking software using **QRM codes**, **PubSub**, and **mySQL**.  
Rationalized production design based on event post-mortem analysis.  
Recommended parts, materials, and tools to overcome engineering and usability challenges.  
Designed custom 3D-printed parts to improve durability and streamline assembly.  
Developed and iterated mass-production methodologies to meet requirements.  
Analyzed failed units for causes of failure and revised design to reduce or eliminate rate of failure.  
Drove upon live event experience to make recommendations regarding industry-standard solutions, practices, and common challenges.

#### Motion Graphics Software Engineer & Visual Artist, Vektor Selektor 2011-present

Created end-to-end, real-time visual content for live events using Unity, Quartz Composer, GLSL Shaders and Processing.  
Designed **beam-computer interaction** schemes for controlling live visuals using control surfaces and gesture devices, including Wii Remotes, Xbox Kinect, Leap Motion, and various MIDI controllers.  
Design LED and **projection mapping** for stages.  
Solve complex technical challenges on location, using limited available resources.  
Performed original content live before audiences of up to 10,000.

#### Software Engineer, BetterHelp 2015-2016

Worked on an **apple team** to release iterative improvements to **user experience** based on data acquired from **multivariate analysis**.  
Unlocked **Redux** for **PHP** to identify bottlenecks and reduce landing page load time by 40%, using caching, asynchronous loading, and optimized database queries.  
Developed automated qualifications and approval for financial and applicants, freeing significant customer support resources.  
Integrated billing system with **Paycom's Braintree** API, standardizing payment flow and allowing acceptance of new payment methods.

#### Software Engineer, Visions in Education 2015-2016

Mastered student information portal.  
Standardized course catalog and event listings.  
Audited Wordpress extensions and determined optimization strategies to minimize overhead and points of failure.  
Brought outdated code repository up-to-date.  
Audited repository and codebase diff's to determine points at which undesirable behavior was introduced.  
Developed strategies and solutions to avoid future complications.

#### Lead Software Engineer, Taylor Online Marketing 2010-2017

Designed **mySQL** database for auto-shipping leads.  
Built **BESTM API** for partners and affiliates.  
Created customizable form widgets for use by affiliates and partners.  
Refactored system for greater extensibility, to both increase lead volume and offer additional cross-selling opportunities.  
Designed tools for the reporting and visualization of lead data.  
Improved efficiency and agility by **automating** frequent or time-consuming tasks.

#### Software Engineer, Design Reactor 2008

Developed interactive Flash landing page for Disney Parks 2008 campaign.  
Produced pivot-perfect web materials for marketing campaigns, adhering to strict style guidelines.  
Created rich, interactive user interface for agency portfolio, with dynamically populated content.

#### Software Engineer, Jupiter Hosting 2007

Developed custom modules and features for in-house content management system. (Based on Joomla and Drupal)  
Optimized MySQL queries for highly-trafficked websites.

#### Support Technician, UCSC Media Services 2006-2007

Provided technical support to faculty and students using university media equipment including projectors, video cameras, audio systems, and computers.  
Maintained readiness of pool of media equipment for rental and checkout, ensuring good working order, cleanliness, and presence of all included components.  
Operated service vans on campus while observing high safety standards and awareness in accordance with an active campus with high pedestrian traffic.

#### Event Crew, Plan-It-Interactive 2000

Set up and struck large interactive play systems for special events.  
Regularly loaded and unloaded heavy equipment.  
Operated rack-climbing work, ensuring the correct use of safety equipment and procedures by participants.  
Performed on-site troubleshooting and repair of R/C cars.  
Drove box trucks with trailers on highway to and from events.

### TECHNICAL SKILLS

Full-Stack Development  
C++  
Linux  
Plan-Based Programming  
C#  
L-Map  
Linux  
OpenGL  
PHP  
MySQL  
HTML5  
SCSS  
Rage.js  
Node.js  
Ecmascript  
jQuery  
Front-End Development  
Flash  
Real-Time Graphics for Live Events  
GLSL Shaders  
Quartz Composer  
Projection Mapping  
Video Editing  
Agile Development  
Twilio  
Creative Coding  
Arduino  
Object Oriented Programming  
API's  
Content Management Systems  
Lambda  
Webpack  
Adobe Creative Cloud  
Photography  
Video Production  
Generative Art  
Imagines and Automation  
Spline Retraction

### EDUCATION

UC Santa Cruz - Film & Digital Media • 2007  
Napa Valley College Napa, CA - Computer Science • 2002

### COURSEWORK

Abstract Data Structures  
Algorithms  
A/B Analysis  
Differential Equations  
Discrete Math  
Linear Algebra  
Logic  
Digital Media Production  
Film Media Production  
Documentary Production  
Film Theory  
Digital Media Theory  
Social Documentation  
Java Programming  
C Programming  
AP Computer Science  
Cisco Networking

### ASSOCIATIONS

Visual Artist OpenShot Club • 2017  
Visual Artist, Westside Oakland's 2015, Present  
Visual Artist, Camp Question Mark • 2009-15  
Technology Director, SC TV, UCSC • 2005  
Student Trustee, Napa Valley College • 2002

### INTERESTS

Real-time audio-reactive music visualizations  
IoT Projects  
Generative Art

### CORE VALUES

The end user's privacy and security is paramount.  
Minimization doesn't compromise utility.  
The best thing to say when you don't know is that you don't know.

Oakland, CA  
707-853-3731  
cbrislain@gmail.com