

# COOPER BRISLAIN

## Synesthetic Visioneer • Creative Coder

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

### KEY SKILLS

Excellent written communication skills  
Editing software  
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 installation at live events.  
Developed production, q/a, and asset tracking software using **QRM codes**, **Pub/Sub**, and **mySQL**.  
Rearranged 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 audio-reactive, **realtime** visual content for live events using **Unity**, **Quartz Composer**, **GLSL** Shaders and **Processing**.  
Designed **human-computer interaction** schemes for controlling live visuals using control surfaces and gesture devices, including **Wii Remotes**, **Yiihoo Knives**, **LEAP Motion**, and various **MIDI** controllers.  
Designed **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 **agile** team to release iterative improvements to user experience based on data acquired from **multivariate** analytics.  
Utilized **XRay** for **FHIR** to identify bottlenecks and reduce loading page load time by 90%, using caching, asynchronous loading, and optimized database queries.  
Developed automated qualification and approval for financial and applicants, freeing significant customer support resources.  
Integrated billing system with **Paycom's Brex** native API, standardizing payment flow and allowing acceptance of new payment methods.

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

Modernized student information portal.  
Standardized course catalog and event listings.  
Analyzed Wordpress extensions and determined optimization strategies to minimize overhead and points of failure.  
Brought outdated code repository up-to-date.  
Audited inventory and evidence able to determine point 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 tools.  
Built **RESTful API** for partners and affiliates.  
Created customizable forms widget for use by affiliates and partners.  
Redesigned 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 pixel-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

Set up and struck media equipment for **special events** and academic productions.  
Provided **technical support** to students and faculty in the use of **media equipment** including **projectors**, **video cameras**, **audio systems**, and **computers**.  
Maintained readiness of equipment pool for rental and checkout, ensuring good working order, cleanliness, and presence of all included components.  
Operational **service vans** on campus while ensuring high safety standards and adherence to university policies with an active campus with high pedestrian traffic.  
Held keys and access codes to secure areas, media cabinets, and equipment closets throughout the university campus.

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

Set up and struck large **interactive play** systems for **special events**.  
Regularly installed and maintained **heavy equipment**.  
Operational rack-checking wall, 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  
Python-Based Programming  
C#  
LAMP  
Linux  
Swift  
PHP  
MySQL  
HTML5  
SCSS  
Ragel  
Scala  
JavaScript  
jQuery  
TensorFlow  
Python  
Three.js  
Three.js 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  
MVC  
Content Management Systems  
Joomla  
Wordpress  
Adobe Creative Cloud  
Photography  
Video Production  
Generative Art  
Imperative and Automaton  
Spline Retraction

### EDUCATION

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

### COURSEWORK

Abstract Data Structures  
Algorithms  
Nix Assembly  
Discretized Operations  
Discrete Math  
Linear Algebra  
Logic  
Digital Media Production  
Film Studio Production  
Documentary Production  
Film Theory  
Digital Media Theory  
Social Documentation  
Data Programming  
C Programming  
AI Computer Science  
Circuit Networking

### ASSOCIATIONS

Visual Artist, OpenArt Cheli • 2017  
Visual Artist, Wavelength Oakland • 2015, Present  
Visual Artist, Camp Queerest Black • 2009-17  
Technology Director, SF TVU UCSC • 2009  
Student Trustee, Napa Valley College • 2002

### INTERESTS

Generative Art  
Film-Based Programming  
IoT

### CORE VALUES

The end user's privacy and security is paramount.  
Maintenance demands compromise ability.  
The best thing to say when you don't know is that you don't know.

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