

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 experiences.

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 **PHP code**, **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**.
Design **human-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 **agile team** to release iterative improvements to **user experience** based on data acquired from **multivariate analysis**.
Utilized **Xtream** for **PHP** 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 Brexpoint** 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 **person and affiliates**.
Created **unobtrusive form widget** for use by **affiliates and partners**.
Redesigned system for greater **extensibility**, increasing lead volume and providing 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 **photo-perfect** web materials for marketing campaigns, adhering to strict **style guidelines**.
Created **rich, interactive user interface** for agency portfolios, with dynamically populated content.

Software Engineer, Jupiter Hosting 2007

Developed custom modules and features for in-house **content management system**. (Based on **Joomla**)
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 accordance 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.js
JavaScript
jQuery
TensorFlow Development
Flash
Batch Time Graphics for Live Events
GLSL Shaders
Quartz Composer
Projection Mapping
Video Editing
Agile Development
Twilio
Creative Coding
Arduino
Other General 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
Discrete Math
Discrete Math
Discrete Math
Linear Algebra
Logic
Digital Media Production
Film Studio Production
Documentary Production
Film Theory
Digital Media Theory
Social Documentation
Java Programming
C Programming
AI Computer Science
Circuit Networking

ASSOCIATIONS

Visual Artist, OpenArt Club • 2017
Visual Artist, Wikimedia, Oakland • 2015, Present
Visual Artist, Camp Queerest Black • 2009-15
Technology Director, UC TV • UCSC • 2009
Student Trustee, Napa Valley College • 2002

INTERESTS

Generative Art
Python-Based Programming
IoT

CORE VALUES

The end user's privacy and security is paramount.
Maintenance should be a compromise utility.
The best thing to say when you don't know is that you don't know.

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