

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
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 ARCTiC 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**, **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**, **Yiihoo 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, **reducing** significant customer support resources.
Integrated **billing** system with **Paycom's Braintree** API, **streamlining** 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 **security** and **codebase** 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 **uninstallable** form 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 **stock** 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.
Operated **service vans** on campus while observing **high safety standards** and **procedures** in 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 **stock** large **interactive play** system for **special events**.
Regularly **inspected** and **replaced** **heavy** equipment.
Operated **rack-climbing** 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#
Lua
Lisp
Scheme
PHP
MySQL
HTML5
SCSS
Ragel
Scala
JavaScript
jQuery
jQuery
Front-End Development
Flash
Batch 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
Euclidean Math
Linear Algebra
Logic
Digital Media Production
Film Studio Production
Documentary Production
Film Theory
Digital Media Theory
Social Documentation
Java Programming
C Programming
AP Computer Science
Cisco Networking

ASSOCIATIONS

Visual Artist, OpenArt Club • 2017
Visual Artist, Wikimedia, Oakland • 2015, Present
Visual Artist, Camp Queerest Black • 2009-11
Technology Director, UC TV • UCSC • 2008
Student Trustee, Napa Valley College • 2002

INTERESTS

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

CORE VALUES

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

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