

Chris Lombardi

Chemist, Programmer, Weaver

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Goal

To apply my skills in science, programming, and visual design to create user-friendly, sustainable products, thoughtfully tailored to solve real-world problems for real-world people.

Education

California State Polytechnic University, Humboldt *Arcata, CA*

Bachelor of Science in Chemistry, 2022

Organic, Inorganic, Physical Chemistry, Biochemistry and Instrumental Analysis

ACS Inorganic Chemistry Student of the Year

Focus on Microbial Polymer Degradation and Structural Color with Thin-film Polymers

Massachusetts Institute of Technology *Cambridge, MA*

Bachelor of Science in Art and Design, 1987

Minor in Holography and Islamic Calligraphy

Tools, Technology And Skills

Chemistry Lab

Equipment GC-FID, FTIR, UV-Vis, NMR, Schlenk line, HPLC, fluorometer, diode spectrometer

Analysis Software Mathematica, IGOR, LabView, Excel

Software Development

Languages python, JavaScript, TypeScript, PHP, Java, C++, Lisp, PostScript, VB, VBA, Perl, Omnimark, ColdFusion, *many others*

Frameworks and Platforms React, Laravel, Amazon AWS, Vercel, GWT, Spring, LAMP, Custom

Architectures MVC, event subscriptions, networked device control, voice trees

Tools and Concepts SDLC, Git, Docker, Composer, SVN, Mercurial, Bugzilla, Trac, Lucene, UML

IDE JetBrains PhpStorm, PyCharm, and IntelliJ IDEA, Emacs, Visual Studio

OS Mac OS X, Linux, Windows, Arduino

Web

Languages PHP, JavaScript, SVG, Java, Lisp, HTML, CSS, XML, ColdFusion

Tools and Libraries JSON, jQuery, Ajax, D3, AWS CLI, Bootstrap, Composer, Regex

Wordpress Custom plugins and themes, WooCommerce, bbPress, Aweber, payment integrations

Projects E-commerce, web services, event registration, embedded web servers, data integration

Database

Databases MySQL, PostgreSQL, Oracle, MS SQL, MS Access, ODBC, Filemaker Pro, Alpha5

Reporting Excel, Crystal Reports, Access Report Manager, Alpha5

Tools mysql CLI, phpMyAdmin, MySql Workbench

Productivity

Microsoft VBA for Office, Excel Web and database integration, Word automation, Visio

Adobe Creative Suite: Illustrator, Photoshop, Premiere, InDesign, Lightroom; PostScript

Job Experience

Freelance

Internet Archive *San Francisco, CA 2023-Present*

Creator of Internet Archive Reference Explorer (IARE), a tool for Wikipedia editors to provide more relevant and reliable references through the use of the Wayback Machine, a digital archive service. Tools are written in React.js, JavaScript, and python, along with a suite of development utilities.

Weaver *Arcata, CA 2016-Present*

Fabricate scarves and yardage of hand-dyed protein and cellulose fibers using jack and counter-marche looms. Design and calculate dye amounts using open-source draft software and Excel. Participant in Golden State Linen (formerly Chico Flax) farm-to-fashion regeneration project.

Diedrich Roasters, Incorporated *Sandpoint, ID 2017-2019* *Manufacturer of coffee roasting machines*

Created iPad based Task Tracking system for factory employees to log hours by job and client. Laravel, Bootstrap, JavaScript, and Composer used to create back- and front-ends, including Excel features and management tools for administrating, monitoring and allocating employee resources.

TV-B-Gone *cornfieldelectronics.com 2004-present*

Created website with e-commerce, order fulfillment, algorithmic coupons, security fraud alerts, and associated admin reporting tools. Typical LAMP stack: Linux, PHP, JavaScript, Apache and MySQL, with PayPal IPN and Authorize.net integration. Continue to maintain site and admin tools.

SewImages *Oakland, CA sewimages.com 2010-2020* *Local sewing shop offering sewing classes*

Upgraded website for sewing classes and products with Wordpress/WooCommerce, utilizing custom plugins, themes, post types and JavaScript animations. Earlier CMS custom built with PHP, Excel upload and download features, and custom experience checkouts to gather specialized information.

Employment

Butte College *Oroville, CA 2016 – 2018*

Supplemental Instructor for Chemistry; Chemistry Lab Grader; Computer Lab Tutor; Weaving Instructor Assistant

Emergent Network Defense *Washington, DC 2014 – 2015*

Provided Network security visualization using d3 and JavaScript, translating event data from multiple computers into real-time dashboard for visual assessment. Coordinated with a team of network security engineers and data scientists.

Technicon *Oakland, CA 2011 – 2012* *Boutique computer solutions provider serving B2B clients*

Senior programmer, coding with GWT, Java, Spring, Freemarker, Lucene, PostgreSQL and object model design. Projects include REST delivery of engineering parts, complex manufacturing configurators, speed and accuracy upgrades of web services, and ColdFusion legacy maintenance.

Reach Systems, Inc *Oakland, CA 2007 – 2009* *Pioneer of internet controlled building security devices*

Senior web applications developer for monitoring and control of building activity and user credentials. Integrated communications between proprietary hardware and agents in the security arena. Created embedded web servers in security appliances, and created voice tree systems.

Microsoft Financials Division (Volt) *Redmond, WA 2004*

Developed Integrated workflow utilizing Excel templates to generate OLAP reporting tools for regional national managers. Engineered Excel with VBA and ADODB to connect to SQL Servers, and provided configuration tools for fast-changing requirements.

Pacific Interactive *Seattle, WA 1997-2001*

Development lead for proprietary network-based distributed media control system. Documentation Lead for ActiveX component design documents, using UML inspired by design meetings with fellow programmers and clients. Lead developer of Visual Basic, ActiveX, SQL Server and XML components to control and monitor facility-wide audio and visual systems, worked closely with construction teams on-site.

Installations include:

Experience Music Project *Seattle, WA*

Led team to design, develop and install distributed media control system in high- tech interactive Rock and Roll museum, including a 72 channel SeaChange video controller and a facility-wide event scheduler. Permitted control and monitoring of facility by integrating VB custom controls with C++ COM objects, interpreting real-time data via XML.

Microsoft Executive Briefing Center *Redmond, WA*

Developed conference room touch-screen systems to allow each room's audio, video and computer equipment to be controlled from the podium of each room. Developed configuration and monitoring programs for the Center's staff, including a software patch bay emulator. Upgraded facility configuration scheme to incorporate XML so that network structure changes are easily made.

MGM Grand Hotel *Las Vegas, NV*

Designed and developed video programming scheduler that allows staff to deliver and schedule content to giant screen video walls and hotel marquees. Front ends in VB and MS Access with a SQL Server backend.