

I am adept at turning new ideas and hardware components into results and shipped products. I enjoy participating in technology development, support, and sales where I can contribute software, hardware, laboratory experience, and good humor to exciting products.

Experience: C++/Javascript/C# Linux/Windows/macOS

Languages: C++(VC++/clang), TypeScript, JavaScript, C#, HTML 4.999...
Libraries: boost, jquery, backbone.js, require.js, d3.js, google closure
Environments: .NET MVC5, nginx, node.js, Linode, Amazon Web Services,
 Microsoft Azure
Tools: git, TFS, Jenkins, Fiddler, Wireshark, browser F12 tools,
 SQL scripts, JustMock

Software Engineer, Web & Mobile Team
SketchUp October 2015 - Present

- Developing robust websites for SketchUp users across the globe on a two week agile release cycle (JavaScript / TypeScript).
- Improving analytics displays for 3rd party providers of 3D content (D3.js).
- Moving sites built in drupal to more modern technologies (Node.js).
- Working with programmers on the backend, core, and testing teams, as well as sales and support teams to produce excellent products for customers.
- Leveraging AWS and Atlassian services to deliver products.
- Using analytics feedback to improve user interfaces and performance (Google Analytics).
- Implementing search pages to provide responsive interfaces that are cacheable on CDN's as well as palatable to search engines to improve page rankings (Cloudfront / Node.js).

Manager of Software Development, Browser Application Team
ShopAtHome.com March 2013 - October 2015

- Managing a team of five programmers and enabling communication between groups.
- Orchestrating software releases across changes in server, CDN, and browser extensions.
- Development of Toolbar applications for all major browsers in C++ (IE) and Javascript (Chrome, Firefox, Safari).
- Using Unit and Integration tests to validate business logic in browser extensions and supporting backend web servers.
- Use of Boost libraries to increase performance, remove bloat, and clarify business logic.
- Refactored IE Toolbar C++ code to remove need for UAC elevation and cut down installer size by a third. Successful installations dramatically increased.
- Wrote application services, unit tests, and SQL procedures for backend servers handling millions of requests every day from active Toolbars.
- Wrote C# service emitting compact javascript of business logic for thousands of merchants and rules into an easily cacheable file on CDN networks.
- Conceived, designed, and implemented a remote rescue plan for eighty thousand Toolbars broken by IE11 auto-upgrading to get them working for customers again.

Lighting Engineer and Programmer - Independent Testing Laboratories, Inc. 2008-2013

- Design, development, and support of a Win32 multi-threaded C++ application for operation of custom large photometric instruments (goniophotometers and spectroradiometers), overseeing hardware design and instrument protocol, including multi-sensor spatial color readings. In use internally and at several large lighting manufacturers. Included a small http server for a web interface.
- Engineer responsible for report approvals and interacting with customers.
- Maintaining a world-class reputation for accurate reporting, became one of two laboratories chosen for validation of Department of Energy L-Prize contestants.
- Design, maintenance, and improvement of in-house report generation tools calculating industry metrics and producing output in Postscript for reports.
- Training, management, and scheduling for technicians and a programmer in a laboratory growing at 30% a year for over four years.
- Design, management, and oversight of lamp life tests for government and private industry, tracking and measuring thousands of samples.
- Setup and maintenance of Debian GNU/Linux servers for all company documents with multiple redundancies and geographic locations.
- Participated in gaining and maintaining NIST NVLAP Laboratory Accreditation, including document preparation, on site laboratory inspection, calibration certification and laboratory health monitoring.

Software Contractor- Independent Testing Laboratories, Inc. 2004-2007

- Software development in C++ for an AutoCAD plugin tool for lighting calculations and rendering of architectural and roadway environments.

Software Engineer - Lighting Analysts, Inc. 2000-2004

- Software developer on AGI32, a program for lighting calculations for interior and exterior design in C++ and VB6. User interface, direct and indirect lighting calculations in complex geometric environments, and a variety of file format parsers. OpenGL drawing of architectural environments and photometric data
- Setup, maintenance, and security of a webserver for customer software downloading. Reduced the installer size in half to facilitate moving from CD to internet distribution of software. (Apache / mod_perl / Apache C modules / MySQL)
- Conceived and organized educational version offered free to Universities with lighting design curricula, which helped the software corner the market in accurate lighting calculation software.
- Wrote a parser of the ACIS solid modeling file format to allow customers to import complex architectural models.
- Wrote the TCP/IP license server and client library for company-wide licensing agreements
- Attended trade shows to provide direct technical sales support and training.

Education: University of Colorado - Boulder 1999

- Architectural Engineering with Illumination Engineering emphasis.
- Minor in Computer Science, emphasis on numerical algorithms.
- Student administrator for CU Civil Engineering department of a mixed Solaris / NT lab.

Hobbies:

- Home Repair, Biking, Hiking, Model railroading, running my own web/mail services.