

PROFILE

I am a passionate engineer with a focus on well-designed software. I take pride in developing solutions that enrich people's lives. Naturally curious, I have gained experience ranging from embedded devices to web applications, and all areas in-between.

EXPERIENCE**SOFTWARE ENGINEER & FOUNDER, HELIXENT TECHNOLOGIES; BERKELEY, CA — 2004-PRESENT**

Develop iFlicks, a movie organizer and player for Mac OS X. Uses Objective-C as well as core platform technologies, including Cocoa and QuickTime. Integrates with Amazon Associates Web Service for movie metadata.

Develop a social networking framework in Objective-C. Supports the full stack of open web standards, including OpenID, OAuth, RSS, Atom, Activity Streams, Portable Contacts, EAUT, XRDS, etc.

Develop an XMPP framework in both C++ (Qt) and Objective-C. Includes support for IM as well as Jingle and PubSub extensions. Uses a stack-based XML parser implemented with libxml2.

Develop an HTTP server framework in C++ (Qt). Designed to be embedded in applications for IPC. Includes support for CGI and FastCGI gateways to external applications.

Develop a location framework in Objective-C which supplements Core Location with geocoding and reverse geocoding capabilities. Uses APIs from Google Maps, Yahoo! Maps, Yahoo! GeoPlanet and GeoNames.

SOFTWARE ENGINEER, ASPERA; EMERYVILLE, CA — 2005-PRESENT

Develop a desktop application for controlling FASP transfers with a simple and familiar user interface. Transfers initiate via web applications or automatically via RSS feeds. Uses Qt as a cross-platform C++ toolkit.

Develop a cross-platform, cross-browser plug-in for initiating FASP transfers. Exposes JavaScript APIs and drag-and-drop capabilities for use by web developers. Uses NPAPI, ActiveX, and WebKit APIs for browser integration.

Developed a publish/subscribe messaging system for server-side monitoring and control of FASP transfers. Exposes SOAP APIs with WS-Addressing and WS-Notification semantics. Uses open source libraries, including axis2c, libxml2, and sqlite3.

SOFTWARE ENGINEER, INNOVATIVE SYSTEMS; MITCHELL, SD — 2003-2005

Developed general-purpose C++ libraries using object-oriented programming and design patterns, designed for reuse by applications in a Linux-based embedded system. I/O handled asynchronously using select()/epoll().

Implemented STP, an OSI Layer 2 protocol for ensuring loop-free topology in bridged LANs, by interfacing with a Broadcom Ethernet controller present on the logic board of an embedded system.

Developed a voice recognition server utilizing Philips SpeechPearl. A proprietary protocol was used for communication with SCPs in an SS7 network, enabling IVR applications.

EDUCATION

South Dakota School of Mines & Technology, Rapid City, SD — B.S. Computer Engineering, 2003

SKILLS

Windows, Mac OS X, Linux, iPhone OS
C, C++, Java, Objective-C, Python, Ruby, JavaScript
TCP, UDP, HTTP, XMPP, AMQP
OpenID, OAuth, Atom, RSS, PoCo, EAUT, XRDS, XRD, REST
SQL, XML, RDF, JSON, YAML
HTML, CSS, YAML
GNU toolchain, Xcode, Subversion, Git