

Benjamin Smith

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Turning Ideas into Applications

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18+ Years of Big-Picture, Full-Lifecycle Software Development

<https://github.com/BenSmith>

Expert



Linux (20 years)

Advanced



Windows (20 years)

Python (12 years)

C++ (8 years)

C (5 years)

PHP (5 years)

Intermediate



SQL (4 years)

JavaScript (3 years)

PERL (3 years)

Embedded Linux (2 years)

Pascal (2 years)

Beginner



Java (0.5 years)

Android (0.5 years)

Libraries

Qt, Boost, POSIX, STL, MFC, JQuery, Web Frameworks

Services

Apache, MySQL, PostgreSQL

Data Formats

XML, HTML, CSV, JSON, Excel, custom

Network Protocols

TCP/IP (IPv4), HTTP/HTTPS, custom

Version Control

Git, Mercurial, SVN, CVS

Defect/Issue Tracking

Redmine, Pivotal, Trac, Bugzilla, Google Code, custom

IDEs/Compilers/Build Systems

Qt Creator, Visual Studio, Eclipse, JetBrains IDEs, gcc, EMACS, KDevelop, Delphi, make, CMake, automake, autoconf

Software Development

- All stages of software development: initial concept, architecture, design, implementation, deployment, product revisions, support, refactoring, defect resolution, platform updates, and other maintenance
- Independent and team-based work
- Object-oriented programming and design patterns
- Specification, API design, and documentation
- Formal and informal development methodologies
- Performance tuning and monitoring
- Author of applications, libraries, and system services
- Network, multi-thread, and multi-process programming
- Programming language interoperability
- Persistent troubleshooting, debugging, defect tracking, and resolution
- Legacy system enhancement, modernization, and maintenance
- Develop modernization plans for legacy codebases
- Software performance tuning and optimization
- Knowledge and research for development language-specific best-practices
- Very effective remote developer

DevOps

- Linux server administration
- System monitoring and performance tuning
- Automated operating system installation and configuration

Leadership and Communication

- Development lead, mentoring, client training, and support
- Client, user, and third-party vendor relationship liaison
- Experience working in cultures outside of the U.S.
- Source control management and training
- Lead development initiatives to migrate to more suitable technologies
- Accountability, issue ticketing, and resolution
- Creating, implementing, and streamlining organizational processes to eliminate bottlenecks
- Collaboration and solution design with domain experts
- Documentation, documentation, documentation

Work History

I-TECH — Software Engineer — September 2014 to November 2017

- Customized, refactored, enhanced, and modernized feature set for TrainSMART, a LAMP web application that is widely used in Africa to retain and track current qualifications of doctors, nurses, and other healthcare workers.
- Increased server reliability from reboots a few times a week to over 99.999% uptime. Other system modifications optimized system performance and improved data reliability.
- Developed a migration plan to support wildcard SSL for all domains (80+), which involved updating from PHP 5.2 to 5.6, MySQL 5.1 to 5.6, and CentOS 5 to CentOS 6. Performed server migration and most of the source updates.
- Full-stack system enhancements from Linux server configuration through Apache, MySQL, and PHP configuration as well as implementing changes in SQL, PHP code, and modern JavaScript.
- Developed a thorough roadmap for modernizing legacy TrainSMART code.
- Worked on multiple other projects: LIS (Laboratory Information Systems) and EMR (Electronic Medical Records) applications; BLIS, iSante, OpenELIS.
- Increased development team productivity with documentation, tooling, and procedure changes that eliminated errors and time-sinks.
- Managed git version control repositories, migration, and education, finally migrated to GitHub.
- Implemented issue tracking and documentation for TrainSMART. No formal issue tracking was in place. Trained users for the system.
- Knowledge transfer/training for developers, system administrators, and users for new technologies at local and international I-TECH offices.

TEKSystems — Contract Software Engineer — ZETEC, Inc — March 2014 to September 2014

- Implemented support for new hardware in a legacy C++/Qt codebase used for non-destructive nuclear reactor and power plant equipment testing.

Mobius Industries USA, Inc. — Software Engineer — March 2009 to September 2013

- Solely created a Windows and Linux client/server system with significant cross-platform shared code for the US Marine Corps that remotely installed Windows and Linux on laptops to train Marines in the field.
- Specification and ongoing requirements gathering from client to meet changing end-user needs.
- Shipped over 500 instances of this system, used to configure thousands of laptops and train thousands of Marines.
- Training and support for the client and system users, on-site and remotely.
- Applied C++, Python, and open-source technologies Boost, Boost::Python, Qt, Trac, Redmine, Doxygen, and git to produce solid code.
- Applied metaprogramming techniques to serialize and create classes on the fly.

Freelance Developer — February 2002 to Present

- Ported a C++ Windows-based streaming video game playing application to a Linux embedded system.
- Ported significant portions of Apple's Core Foundation C library to Windows.

Cytopeia, Inc. (Seattle, WA) — Lead Software Developer — October 2004 to January 2007

- Maintained, repaired, refactored, documented, and enhanced the Windows C++ software that controlled and acquired data from a high-speed cell sorter and its optional peripherals.
- Led a small development team.
- Instituted source code version control and build policies.
- Added threading and hardware support for a serial port monochrometer peripheral.
- Worked with hardware engineers, researchers, and end-users to add new functionality and correct issues.

ScenicSoft, Inc. (Lynnwood, WA) — Software Engineer II — April 2000 to November 2002

- Maintained, refactored, and enhanced ScenicSoft's flagship product, a 300,000+ line Object Pascal prepress application that output page-imposed PostScript for book, magazine, newspaper, and other print publication formats.
- Integrated functional enhancements to support new printing techniques and add support additional vendors' printing hardware.
- Migrated company to a more reliable source code version control solution and maintained the version control server.

Flying Crocodile (Seattle, WA) — Web Hosting Lead Developer — April 1999 to March 2000

- Developed a LAMP stack customer-facing web hosting management tool.
- Linux and FreeBSD Systems Administration.

ConnectSoft, Inc. (Bellevue, WA) — Web Specialist — December 1997 to January 1999

- Developed a LAMP web-based gateway for ConnectSoft's text-to-speech phone to Internet gateway.