



Bennett Smith

Founder, Senior iOS Developer

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Profile

Software Architect living and working in the San Francisco Bay Area. My passions are building and shipping high-quality software products, building agile software development teams, managing product deliverables, establishing and championing effective engineering practices, and motivating teams to exceed objectives while growing individual skills.

Skills

Experienced at developing GUI, Client/Server, Distributed and Mobile applications on Windows, Mac, Linux and various embedded platforms. Fluent in C/C++, C# and Objective-C programming languages. Knowledge of Ruby on Rails, Python, Perl, JavaScript and PHP scripting languages. Frameworks used include Cocoa, iOS SDK, Core Animation, Core Data, Quartz Composer, MFC, ATL, Cocoa, Qt, QtopiaCore, Boost and STL. Experienced with deploying production services on Amazon EC2, S3, SQS and SDB using EngineYard, Heroku, RightScale and directly through Amazon Management Console.

Business Ventures

Founder & CEO, FocalShift, LLC

05/11 - PRESENT

FocalShift provides contract software development, project management, and architectural guidance for clients developing native "mobile-first" applications. We specialize in the design and implementation of mobile software solutions for iOS devices and develop Linux-based backend web services in support of connected mobile apps.

FocalShift can partner with you to develop an idea from start to finish, take a technical leadership role working with your team as you transition to iOS development, or help you bridge a short- or long-term resource gap by joining your team. We can also custom tailor our iOS training courses to your needs (<http://www.iosweekend.com>).

CEO/Software Architect, iDevelopSoftware, Inc.

06/99 - 05/11

Consulting firm offering technology consulting, contract software development and technical training for over 15 years. Focus is on development of desktop and mobile software for Apple Mac OS X and iOS. Expert development skills in Objective-C, Cocoa, Cocoa Touch and the Objective-C dynamic runtime.



Employment History

Consulting Engineer, Vendio

05/11 - 12/11

Led development of an iPhone application ("Moe") used to crowd-source product opinions for e-commerce buyers and sellers. Application lets users play 10 question games where they are asked to match similar products. Designed full REST web services specification for back-end (developed by other members of team). Developed all iOS components, including REST web services client, local data model, user interface and social media interfaces for Twitter and Facebook.

Director of Software Engineering, Auctiva

08/08 - 05/11

Joined Auctiva in 2008 to establish a new engineering office in Silicon Valley, CA and hire a team to develop e-commerce solutions. Company headquarters are in Chico, CA which is located approximately 4 hours North of Silicon Valley.

Drove all aspects of operations in San Jose engineering office from inception until company acquisition by Alibaba. Responsibilities included hiring, team building, setting technical direction, software development processes and performance reviews. At peak operations the team was 15 engineers across three teams (infrastructure, order processing and merchandise services) and a separate quality assurance team with 2 test engineers.

Designed overall software architecture for REST web services used to manage high-volume e-commerce store fronts for Auctiva sellers wishing to move a portion of their business off-eBay as part of a sales diversification strategy. Platform services developed using Microsoft .NET and WCF. Store front developed using Ruby on Rails. Product search services developed using SOLR/Lucene.

Principal Software Engineer, Pano Logic

01/07 - 08/08

Responsible for development of a new Windows Desktop Virtualization product. Helped to introduce Agile Development processes to the engineering team. Owned the build and source-code control environment for entire product suite. Setup cross-platform build system to support Linux and Windows development using CMake. Implemented continuous integration build system using Parabuild. All applications are build using Visual C++, Win32, OpenSSL and Trolltech Qt4 and Qtopia Core.

Developed a multi-threaded Windows service used to communicate with Pano device over UDP protocol. A proprietary network protocol was used to decouple keyboard, mouse and monitor activity from a virtual machine running on a VMware ESX server. The Pano device is a custom piece of hardware developed in-house to replace existing desktop computers in a corporate setting.

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Developed a custom GUI for user login and system control using Trolltech Qtopia Core running on Linux. GUI is first piece of software seen by customers when a Pano device is powered up. Developed code to interface with Active Directory for user authentication using OpenLDAP libraries.

Developed desktop applications to permit end-users to control operating parameters for the Windows service and Pano device. The GUI was developed using Visual C++ and Trolltech Qt4. It included use of the Trolltech Qt Solutions system tray classes and a custom-built Windows shared memory IPC system for communications with the Windows service.

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Software Architect/Team Lead, CPU Technology

04/03 - 01/07

Led a team consisting of two software developers, one quality assurance engineer and one part-time college computer science intern that was responsible for architecture, design, and development of System-on-Chip (SOC) engineering tools. Key tools included a Verilog-like proprietary circuit design language compiler, a cycle-based digital circuit simulator, a debugging and system introspection environment, and a regression test automation framework.

Responsible for developing enhancements and bug fixes for desktop applications using Visual C++, MFC, Win32 API and the Rogue Wave Stingray GUI class libraries. Developed new applications using Trolltech Qt4 framework and the Boost C++ class libraries. Refactored existing 32-bit MFC applications in preparation for porting to Win64, Linux and Mac OS X platforms.

Designed an object-oriented UI framework to improve consistency of menu display, keyboard shortcut mappings, and docking window behavior across all applications in the CPU Tech tool suite. Implemented framework using Visual C++, MFC, and Boost. Added scripting capabilities to framework using the Boost.Python library and the Python interpreter.

Led effort to improve software engineering practices within organization, across teams and departments. Developed software engineering procedures in support of ISO 9001:2000 certification process for CPU Tech. Introduced Perforce software configuration management system. Established procedures for migrating existing Visual SourceSafe assets to Perforce. Coordinates the selection and implementation of the TestTrack Pro bug tracking system.

Principal Software Engineer, MetaEdge

06/01 - 03/03

Primary responsibility for architecture, design, and development of QualityInsight and C-Insight, two Microsoft SQL Server focused products for Data Warehousing and Business Intelligence rapid solution development.



Provided technical leadership for a team consisting of twelve engineers ranging in experience from junior to senior levels. Tasked with improving software development culture within organization. Successfully introduced Extreme Programming (XP) software development process to company.

Accountable for all feature enhancements and new product development for C-InSight and QualityInsight. QualityInsight developed using Microsoft .Net Framework, WinForms, ASP.NET, ADO.NET, XML, and the C# language. C-InSight developed using MFC, ADO, Win32 API, Visual C++ and Visual Basic, and ATL/COM.

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Lead Technical Architect, PulseMD

11/99 - 06/01

Responsible for the design and implementation of a PACS-like system that processed medical transactions (prescriptions, lab orders, eligibility checks, etc.) and performed patient visit charge capture on the Windows platform. Principle focus was on developing a distributed system that achieves high levels of security, scalability, manageability, and reliability.

System design incorporated Microsoft Windows Distributed Networking Architecture (DNA). The presentation layer was implemented using Visual InterDev and IIS/ASP. The business services layer was implemented as a series of COM components with MTS. The data access layer was implemented as COM components using ADO/OLE DB to access Microsoft Access and SQL Server databases.

Accepted industry standard protocols were utilized for all network communications (HTTP, XML/XSL, SOAP, SSL/TLS, etc.). Development was done using Microsoft Visual C++ with ATL and MFC, Visual InterDev with ASP, and Microsoft SQL Server. The system was deployed on Microsoft Windows 2000.

Note: pulseMD shutdown all operations on July 1, 2001 after failing to raise additional venture capital.

Software Team Lead, PeopleSoft

01/08 - 11/99

Responsible for managing a team of six engineers working on a suite of development tools for building custom Supply Chain Planning applications. Tools included a custom language (SPL), a graphical development environment/forms manager, and a client/server communications protocol.

Responsible for the development of system level architecture for a supply chain planning transaction processing platform. Worked on improvements to the client/server communications architecture for transaction routing. Developed performance enhancements for SPL runtime class library, with a focus on the areas of dynamic memory utilization.



All tools developed were cross-platform; supported on HP-UX, Solaris, AIX, Linux, and Windows NT. Development was done in C++. Client user interface developed using MFC and ActiveX controls.

Technical Team Lead, Kanisa

03/98 - 10/98

Designing application architecture for a client/server knowledge management software system for Windows NT using Object Oriented design techniques using Rational Rose Enterprise Edition and Unified Modeling Language (UML).

Developed an interface between the Kanisa Knowledge Management Architecture and various third party call center applications (Vantive, Scopus, Remedy). Utilized a mix of ActiveX, OLE Automation, and Visual Basic for Applications (VBA) to accomplish the interface.

Sr. Software Engineer, Advantest R&D Center

01/97 - 03/98

Investigated the applications of component based software technologies such as ActiveX, COM/DCOM, ATL, and CORBA to the next generation of semiconductor test systems.

Influential in the decision to migrate to Windows NT for next ATE platform, helping other engineers on Visual C++, Windows NT 4.0, and various PC development tools. Acted in mentoring role for software engineers new to object-oriented techniques.

Successful conversion of semiconductor testing software from C language to C++. Increased object-oriented nature of system through the introduction of an ATE Test framework and numerous design patterns. The platform for this work was a hybrid system running Sun Microsystems SunOS 5.5.1 and WindRiver Systems VxWorks real-time operating system in a dual CPU VME chassis connected to custom ATE hardware. GNU g++ was used as the programming language. Rational Rose/C++ was used for object-oriented design work.

Software Architect, SSGI

04/92 - 12/96

Principle architect for Prowess Pro-SIM, an FDA Class II medical device for virtual simulation of cancer patient treatment planning in a radiation oncology setting. The platform for this system was Windows NT 4.0 on a Digital Alpha AXP Workstation. All programming was done in Microsoft Visual C++. OpenGL was used for all 3D graphics, and MFC was used for the user interface elements. ActiveX controls were utilized in the development of the user interface.

Provided technical management for Software Engineering department consisting of six full-time software engineers and two part-time programmers. Coordinated software requirement changes with Physics, Quality Assurance, and Customer Support departments. Conducted

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engineering design and code reviews. Performed employee performance evaluations for engineering staff.

Developed interface software for DICOM image import/export and transfer between Pro-SIM and various imaging devices. Specified and designed a custom ActiveX control for histogram equalization display in medical imaging software application.

Gathered requirements from end-users and in-house experts, performed use-case analysis of problem, and designed Pro-SIM object framework. Utilized the Booch method for iterative development using the Rational Rose/C++ CASE tool. Responsible for the development of Prowess RTP, a Radiation Therapy Treatment Planning software system to assist with the treatment of cancer. Programming was done using Microsoft Visual C++ 1.52. The platform for this system was Microsoft DOS 6.2 using the DOS/16M extender from Tenberry Software.

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Publications

Howard K. Wolff, Tom P. Vayda, Steve V. Murakami, and C. Bennett Smith, *The Design and Implementation of a Unix Performance Analyst's Workbench*, The Proceedings of the 1989 Summer Computer Simulation Conference, July 24-27, 1989, Austin, Texas.

Howard K. Wolff, Tom B. Costales, and C. Bennett Smith, *A Methodology for Performance Comparisons of UNIX Microcomputers*, California State University, Chico; Computer Science Technical Report, November 1990.

Education

CSU Chico - BS Computer Science, Systems Option

1993

Lead research assistant for team developing a UNIX Performance Analyst's Workbench.

Developed a number of programs that provided a means for measuring and characterizing workloads on a UNIX system, and the ability to simulate these workload characteristics on a machine under test.

Teaching assistant for Computer Science department's only graduate level UNIX course for three semesters (01/01/89 - 05/25/90). Provided instruction on numerous topics and hands-on help for the students. Topics included shell programming (sh, ksh), awk, network tools, system administration, and the use of system calls in the C programming language.

Continuing Education

- iPadDevCamp 2010, iOSDevCamp 2010, iOSDevCamp 2011, iOSDevCamp 2012
- WWDC 2010, WWDC 2011, WWDC 2012
- Big Nerd Ranch Objective-C/Cocoa Programming Course
- Big Nerd Ranch iPhone Programming Course



- Rational Rose Training, Rational Software
- Rational Object-Oriented Analysis & Design using UML, Rational Software
- How to be a more Effective Team Leader, Rockhurst College National Seminars
- Cross-platform C++ GUI Application Development using Qt4, Trolltech

“For Fun” Programming Projects

- Developed a Safari browser plugin using Objective-C and Cocoa in order to capture HTML content directly from browser sessions and do price analysis of on-line store catalog items. Involved low-level reverse engineering of Safari, use of “method swizzling” and “class posing” in order to gain access to Safari internals. Used SIMBL input manager in order to inject application into address space of browser. Runs on Mac OS X 10.4 and 10.5 in all currently supported versions of the Safari browser.
- Developed an application called Mile Marker to track fuel consumption and cost data using Trolltech Qt4 and Xcode on Mac OS X 10.5. Cross-compiled to Windows platform.
- Developing an iPhone version of Mile Marker using Objective-C and Cocoa Touch.

Teaching Experience

iOS Weekend, FocalShift LLC

10/12 - PRESENT

Developed a week-long course and a 2 day short course for Objective-C and iOS development. Delivering course to groups ranging in size from 5 to 20 people in a workshop setting.

UC Santa Cruz Extension - Windows Systems Programming

1998 - 2005

Taught evening courses at Santa Clara UCSC Extension facility. Topics covered include Microsoft .NET (Visual Studio .NET, C#, ASP.NET, ADO.NET, WinForms), Win32 system and application (GDI, MFC, Visual C++) programming, SQL 2000 database development, web application development, and application debugging techniques. Developed material for XML/XSLT and Advanced Win32 GDI/API applications development courses. Consistently receive high scores from students on end-of-term instructor evaluations.

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