

# Jeff Fitzsimons

## Summary

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Senior software engineer with over ten years of professional experience. Primary experience in C++ development on Microsoft Windows platforms, from device drivers to multithreading, networking, and user interface development. Additional experience in Java, .Net, and web service technologies such as PHP, SQL, Linux, and others.

## Experience

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September 2009– Present **Travel:** Japan

June 2009– August 2009 **IEWatch Software**, San Francisco, CA  
Consultant

Designed and developed multimedia software prototype to annotate, track, and review video evidence for use in court cases. Used Visual Studio 2008, MFC, BCGSoft UI library.

December 2008– May 2009 **Travel:** Southeast Asia, California

2005–2008 **Cloudmark**, San Francisco, CA  
Sr. Software Engineer

Developed and maintained anti-spam software, primarily plugins for Microsoft Outlook and Microsoft Outlook Express. Majority of work performed in C++ using ATL, WTL, and Win32.

- Debugged complex, multithreaded systems involving Win32 synchronization, message pumps, COM apartments, and hooking.
- Created a software module to seamlessly update client-side software and spam-detection algorithms using WTL, WinInet, CryptoAPI.
- Developed a flexible, extensible, and reusable set of classes to simplify and standardize internal code for Win32 multi-threading and task-dispatching.
- Maintained Microsoft Outlook plugin using MAPI and Microsoft Outlook Object Model.
- Created software to bypass limitations of Microsoft outlook Object Model's toolbar support, using Win32 subclassing and GDI.
- Revised internal build system for greater reliability and flexibility. Automated builds of multiple products, each white-labeled and internationalized. Employed virtual machines to reduce hardware dependency.
- Redesigned existing POP3-proxy-based software to use Microsoft's published COM API for Outlook Express (OEAPI), greatly reducing code size while improving both reliability and speed.
- Modified software for execution under Windows Vista with User Access Control (UAC),

and 64-bit operating systems.

2002–2005

**IPIX**, San Ramon, CA

Sr. Software Engineer

Designed and developed software applications for Internet connectivity and Web applications. Tasks initially focused on Win32 in C++, later on PHP and web services.

- Developed a compact, embeddable HTTP server to handle local file manipulation and image processing for Flash-based Web applications. Used C++, COM, ATL, and Windows Sockets.
- Implemented and maintained a support site for client-developer use in Drupal using PHP and PostgreSQL.
- Developed an Internet application for maintaining customer accounts and advertisement records using PHP, Drupal, Oracle, and PostgreSQL.
- Redesigned customer database and created scripts to automate data migration from Oracle to Postgres.
- Performed customer integrations using HTML, CSS, JavaScript, and proprietary IPIX APIs.

2002

**GPware**, Menlo Park, CA

Sr. Software Engineer

Implemented a Pocket PC-based in-car navigation system employing a Macromedia Flash user interface coupled with a C++ back-end. Accelerated development of product to a marketable state in under four months.

- Developed software for the Pocket PC 2002 platform using C++, COM, ATL, Extended MAPI, Macromedia Flash and ActionScript, XML, Windows Sockets, and the Pocket Outlook Object Model.
- Coordinated with graphic design and marketing departments to rapidly bring a ground-breaking product to market.
- Refactored existing code bases to eliminate bugs and integrate revised feature sets.
- Created complex algorithms to utilize third-party mapping and routing APIs.
- Mentored coworkers in software development using Visual C++ and Win32.

1998–2002

**GTCO CalComp**, Scottsdale, AZ

Software Engineer

Conducted full life-cycle development of software products ranging from presentation and collaboration applications to USB, HID, and serial device drivers for Microsoft Windows platforms.

- Created market-leading calibration algorithms to correct for optical distortion of projected images.
- Performed extensive user-interface design and implementation using MFC and Windows GDI to maximize performance, improve user experience, and establish compliancy with usability standards.
- Mentored coworkers in C++, MFC, Win32 (including multithreading and messaging), GDI, STL, OOP concepts & design, serial communications, HTML, XML, and debugging strategies.
- Developed and maintained robust and thoroughly object-oriented driver architecture to promote reuse and minimize code redundancy.

- Ported core functionality of flagship software suite from C++ and MFC to Java 2, JFC, and Swing. Developed with Borland JBuilder.
- Added COM Server functionality to existing applications to provide interoperability with Visual Basic and other high-level languages.
- Installed and maintained RedHat Linux to provide routing, encrypted VPN, firewall, and web server functionality. Involved services such as ipchains, Apache, and MySQL.
- Introduced rigorous code documentation standards using Doxygen.

## Skills

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Languages	C++, C, C#, Java, PHP 4, JavaScript, SQL
APIs	Win32, Component Object Model (COM), ActiveX, Microsoft Crypto API, Palm OS (various), OpenGL, ODBC, Pocket Outlook Object Model, Extended MAPI, Telcontar Rich Map Engine (Core Library and Routing API), MSXML, MSHTML
Frameworks and Libraries	Standard Template Library (STL), Boost, Active Template Library (ATL 3, 7), Windows Template Library (WTL 3.1 - 8), Microsoft Foundation Classes (to MFC 4.22), BCGSoft Professional, SQLite
Environments and Tools	Microsoft Visual C++ (to 9.0), Visual Studio 2003 - 2010, Visual C++ Embedded 3.0, InstallShield Pro, Windows Installer XML (WiX), Borland JBuilder, Compuware/NuMega SoftICE, BoundsChecker, and DevPartner Profiler, Coverity Static Code Analysis tools, VMware Workstation, Doxygen Documentation System, MySQL, PostgreSQL, Concurrent Versions System (CVS), Subversion (SVN)
Platforms	Microsoft Windows (to Vista, Server 2003, 7), Pocket PC 2002, Palm OS (1.0-3.5), Linux (to 2.6.x kernel)

## Education

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1998	<b>Western Oregon University</b> , Monmouth, OR BS in Computer Science, minor in Mathematics. Completed upper division course plans in both Software Engineering and Theory of Computation. Computer Science Achievement Award recipient.
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