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## Principal Software Engineer

**Architects rock-solid platforms • Designs and implements best-of-breed solutions • Effectively communicates with both technical and non-technical peers and partners • Mentors junior developers regarding best practices and professional software development**

A professional software engineer with proven experience shipping dozens of releases of production-quality software, both for end-users' machines and on servers in the cloud. Passionate about software design at an architectural level and also from a user-interface/user-experience point-of-view. Understands the tradeoffs inherent in getting it out the door. Able to dig deep into existing codebases to understand and successfully refactor and redesign when needed.

## Languages and Skills

Platform Architecture, Extensibility, Asynchronous Programming, UI/UX Development, C#.NET, async/await, WPF/XAML, MEF, Reactive Extensions, MVVM, ASP.NET, MVC, MSBuild, PowerShell, Javascript/AJAX/jQuery, HTML/CSS, C/C++, Java, SQL, PHP, Perl

## Experience

### Senior Software Designer Engineer, Visual Studio — Microsoft Corporation

2009–present

Designed and implemented the addition of Windows Phone 8.1 support to the AppX manifest designer. New platforms and platform features can be added and the designer UI will adapt to the platform features at runtime, resulting in a single codebase to maintain, reducing duplicated code.

Designed and implemented 3rd-party extensibility point for managing “connected services” used to integrate Windows Azure Mobile Services into end-developer applications. This design is subsequently being used as a model for the redesign of the core Visual Studio behavior to “add a new item” of any type to any project.

Redesigned the AppX manifest designer’s multi-resolution image management implementation to handle the UI presentation of hundreds of simultaneous images without adversely impacting responsiveness.

Designed and implemented tool to migrate thousands of legacy and proprietary setup authoring files into open-source WiX authoring, resulting in significantly improved componentization and flexibility.

Mentored junior developers, focusing on software design and architecture and best practices.

**Side Projects:** *These projects were undertaken on my own initiative, based on needs that I saw during day-to-day work.*

Single-handedly wrote a source-code indexing and search service with a web front-end that routinely handles searching through tens of millions of source files in less than one second. This service supports the needs of a few hundred developers, and ran with no noticeable performance impact in the background of my primary development machine.

Created a Visual Studio project “flavor” to add PowerShell-supported deployment for any C#, VB, C++, or JavaScript project. This was inspired by a colleague that disliked managing numerous and disparate separate deployment scripts for prototype hardware projects. My solution enabled embedding the deployment script directly into the project, and tied directly into the Visual Studio “Build.Deploy” command.

### Senior Software Design Engineer, Bing — Microsoft Corporation

2007–2009

Led technical and UI/UX design of Bing search relevance experimentation platform, and implemented core components, resulting in a more than 100-fold increase in productivity of the Bing search relevance team.

Trained development team in Beijing to assume ongoing responsibility of experimentation platform support and development.

Designed and developed tools to assist in generation and analysis of user search-result click data, resulting in improved search results for time-sensitive queries.

Designed, implemented, and shipped a solution to allow result-specific excerpts to be provided for front-end display, including images, video, table-of-contents-style lists, and user-expandable content, resulting in a patent application.

**Software Design Engineer, Windows Live Message Boards** — Microsoft Corporation 2006–2007

Designed, developed, and shipped an AJAX-based web UI for a message boards incubation project, resulting in an easily skinnable and flexible product used for MSN, MSNBC, and other partners.

**Software Design Engineer, Microsoft Money** — Microsoft Corporation 1994–2006

Designed, implemented, and shipped features in almost every part of Money (versions 4.0 through 14.0), from back-end calculation engines to front-end custom UI controls, including core components of online banking, account register, budget engine, lifetime planner, and reports and charts.

Led development effort for Money 2004 (version 12.0), overseeing feature set and development schedule, and ensuring a smooth release cycle.

## Patents

**Providing Representative Samples Within Search Result Sets** — #20100211561 filed August 19, 2010

**Versioning Component for Applications** — #20060085860 issued October 15, 2004

## Volunteering

**AP Computer Science Teacher** — Hazen High School, Renton School District 2012–2013

In parallel with full-time employment at Microsoft, volunteered as the principal teacher for a full school-year AP Computer Science class of 30 high-school students. This entailed creating lesson plans and in-class activities, quizzes and tests, and projects, and grading all of those as well. My class performed above the national average on the 2013 AP Computer Science Exam, scoring fewer 1s and 2s (low scores), and more 3s and 4s (moderate to high scores).

## Education

Bachelor of Science in Computer Science, University of Washington (at age 19) 1993