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Douglas Webb

Senior Systems Architect with 20+ years of experience primarily with C#, Perl, IIS, Apache, Windows, Linux, Solaris, Javascript, HTML, CSS, and XML. I've designed and built everything a high-volume high-performance web-based application needs, from front to back. My development experience includes most web technologies in the .NET, and LAMP stacks, and I've been designing Service-Oriented Architectures and RESTful APIs since long before SOA and REST became buzzwords.

Technical Skills

Likes: perl asp.net-mvc rest jquery javascript git linux c# html5 twitter-bootstrap unity3d
Dislikes: java

Experience

Jun 2017 → Current **Freelance Software Consultant**

Most of my work involves websites in some way, but I'm a full-stack developer. My relationship with Surround Technologies allows me to use their Accelerator product to produce a full back-office enterprise-class system from your existing or newly-designed database, with a custom website and/or Customer Portal integrated with in on the customer-facing front-end. These websites use Bootstrap and are fully-responsive, so they work well on everything from a smartphone to a large desktop monitor. The back-office management application can be either a WPF Windows desktop application or an ASP.Net MVC website. If you'd like your developers to work with Accelerator as well, you'll need to purchase a license and services from Surround Technologies. I'll work for you as a sub-contractor, and you'll also get access to the rest of Surround's team, our support site, and other benefits.

If a large-scale back-office/customer portal application project is not your thing, I can also help you with smaller tasks. I've been working with web technologies for a long time, so if you just need a little help getting a javascript plugin working, getting a web page to look the way you want, or getting a templated website up and running with a theme you like so that you only need to worry about adding content, I can do that for you.

I'm also a very experienced Perl programmer; more than half of my career was spent working on Perl backends and services for a large web application, Wolters Kluwer's OvidSP. Perl isn't in demand much anymore for new development, but there's a lot of legacy code out there still being used. If you need some part-time help maintaining a Perl application or set of scripts, or if you'd like to migrate them to a different language, or even if you'd like to develop something new in Perl, let's talk.

2011 → Current **Senior Software Developer** – Surround Technologies
.net, html5, jquery, silverlight, javascript, css, c#, asp.net-mvc, wpf, wcf

- Implementing HTML5 based mobile and web user interfaces for "Accelerator for .NET" product
- Portfolio available at http://webbindustries.com

2010 → 2011 **Lead Architect** – Experian CheetahMail
perl, oracle, git, catalyst, extjs

- Performed initial evaluation of Business Intelligence reporting system products, for potential use to replace and enhance the CheetahMail reporting system. This involved reviewing business requirements, defining evaluation criteria, an initial review of products and capabilities, and presenting results to the Product Management team to discuss functional possibilities beyond the initial requirements.
- Performed analysis and developed Architectural Design proposal for integrating a CheetahMail product with a third-party product in order to improve short-term functionality until the CheetahMail product could be fully upgraded.
- Assisted in designing and deploying new development infrastructure needed to produce a Mobile version of the CheetahMail web application.
- Contributed to defining Software Development Process Documentation Standards, Tools, and Best Practices.
- Produced Technical Specification for integrating Facebook "Like" button support into CheetahMail mailings and marketing displays.

1996 → 2010 **Senior Software Engineer / Architect** – Wolters Kluwer Medical Research
perl, html, css, jquery, solaris, apache, mod-perl, xml, xslt, c#

- Lead architect, designer and implementer of OvidSP User Interface for over 13 years.
- Lead or participated in all phases of software development lifecycle, including requirements gathering and analysis, product design, high level technical design and estimation, low level design, construction, testing, deployment, and maintenance.
- Designed transitional architecture for migrating Perl/C++ system over to C#/SharePoint platform. Developed .NET library that allowed any .NET language to interact with existing Perl modules in old system.
- Helped to design hardware and software infrastructure for live production system, including high-availability, fault-tolerance, and multiple regional data centers. Currently this system supports 6-7 million HTTP requests per day for 300K daily sessions and 3K-5K concurrent users from all over the world.
- Developed Software Development Lifecycle (SDLC) Best Practices guidelines for developers, and contributed to SDLC guidelines for Product Management, Project Management, Development, Quality Assurance, and Release Management.
- Designed and implemented UI, internal RESTful service, and portions of content production stack for Books@Ovid product which added textbooks to WKH's product line.
- Designed an approach to implementing Nursing@Ovid product as a configurable switch on the OvidSP product. This allows both products to share 95% of the codebase and infrastructure, and helps Nursing@Ovid to receive functionality upgrades whenever OvidSP does without separate / additional development and QA.
- Designed and implemented multiple internal services to support the OvidSP application, including:
    - A very high performance statistics gathering and recording service managing 20-30 million events per day.
    - A high performance authentication and authorization service handling 1.2 million requests per day.
    - An XML content transformation and delivery service handling 25,000 textbook chapters per day (typically 50KB-400KB per chapter).
    - A multimedia service handling over 1 million image and PDF requests per day.
    - A RESTful API service (not widely used but capable of high load and sub-second response times).
    - A custom httpd server similar to but predating mod_perl, handling over 6 million requests per day.
    - All content-delivery services above are fully dynamic in order to enforce very strict content authorization rules and to insert user-specific enhancements into publisher-provided content.
- For non-production use, designed and implemented an automated HTTP log analysis and reporting system, various content development tools for XML/XSLT processing, and numerous small command-line and web-based tools that support software development, project management, QA, and senior executives.

There are two public resources which show the OvidSP application:

- Ovid Resource Center
- Ovid Channel on YouTube

1992 → 1996 **Engineering Intern / Research Assistant** – Design and Manufacturing Institute, Stevens Institute of Technology
c++, java, mfc, prolog, cad, rapid-prototyping

During this period I was an Engineering Intern Spring and Fall 1992 and Summer 1993, and a Research Assistant Fall 1993 - Fall 1996 while I was in Graduate school.

- Performed research in the use of Rapid Prototyping in the context of prototyping injection molded plastic parts.
- Designed and wrote software that accepted CAD models of injection molded parts and produced optimized orientations and support structures needed to build the parts in a Rapid Prototyping machine.
- Designed software for optimized routing and assignment of work tasks in a computerized injection mold manufacturing machine shop.
- Investigated use of genetic algorithms for the optimization of project planning.
- System Administrator and IT Support for the Institute's computer systems.

Jun 1991 → Aug 1991 **Engineering Intern** – GE Astrospace
vax-vms, vms-rtl, cad, satellite-telemetry

- Developed a software application used by the engineering teams to extract data from satellite telemetry systems and produce various charts and graphs. This was a GUI interface that ran on a character-based terminal connected to a VAX mainframe, written using VMS shell programming and Run Time Library (RTL).

Sep 1990 → Dec 1990 **Engineering Intern** – GE Astrospace
cad, satellite-fuel-tanks, thermodynamics

- Helped to analyze and optimize the weight of the fuel system for the Mars Explorer probe, determining which redundant components could be safely removed in the process of re-purposing a generic communications satellite design for a deep-space mission.
- Participated in the theoretical design and practical testing of a direct-measurement satellite fuel gauge. This design ultimately became commonly used, saving companies millions of dollars by avoiding premature decommissioning of satellites which still have sufficient station-keeping fuel.

Education

1988 → 1996 **B.E. Mechanical Engineering** – Stevens Institute of Technology
fortran, c, asm, c++

- 4.5 years for BE in Mechanical Engineering and a minor in Philosophy including 2 years on-the-job internship
- 3.5 years in ME degree program on full scholarship as Research Assistant.

Others

1982 **Background** – Background

I was into electronics before computers, so my first computer was an electronics kit that I built myself, though I had to do it twice because I messed it up the first time. (Hey, I was only 12.) After that I went through a series of Commodore 64s that kept shorting out on my homemade cassette tape interface, until I finally got a commercial one. Since then it's been one PC after another, mostly built from parts.

As far as editors, my IDE of choice for many years was a PuTTY terminal or two, VIM, and Firefox with Firebug. Since starting to work with C# I've developed a love/hate relationship with Visual Studio, but I still need a VI emulator for it to feel comfortable.

If you've read this far and haven't looked at my website yet, go ahead and check it out next but be warned: I update my blog more-or-less annually, and the topics covered there are generally not things I ever talk about at work, so there is no need to worry if you see something odd. My <u>Facebook wall</u> is a much better reflection of my current interests.

Tools

First Computer:	ZX-81 (Assembled from a kit)
Favorite Editor:	Vim, Visual Studio