Josh McCullough

Overview

Objective

To apply and grow my existing skill-set in a challenging, fast-paced, and rewarding software engineering environment.

To bring a new level of efficiency and stability to software projects by utilizing the latest technologies and software engineering ideals.

Summary

I Love Technology (and Learning)

Almost everything I do has something to do with technology and learning. Not only do I write software *every day*, but I always have one or more side projects in progress. In my free time, my goal isn't always to "ship" a product or to reach a defined goal — often I simply want to *learn something*. Whether I'm working on a JavaScript framework, catching a glimpse of Jupiter through my telescope, installing a PC in my car, donating my tech skills for a cause in which I believe, building an HTML5 game engine, configuring a Linux mail server, designing and budgeting my next house project, or printing something in 3D — view my profile on Thingiverse (http://www.thingiverse.com/QuantumConcepts) — it all comes back to technology and my unquenchable thirst for knowledge.

I live and breathe this stuff.

What Drives Me

I'm driven by being challenged. I enjoy facing, dissecting, and solving problems. I also like to help people solve their own problems — view my profile on Stack Overflow (http://stackoverflow.com/users/374198/josh-m?tab=answers) for examples. I am motivated by knowing that *someone* is going to use and enjoy what I am working on. I strive to create concise solutions to the programming problems I face. I believe code is almost an art. A lot of people can write something which *works*, but not everyone can do that *correctly*. I pride myself on writing clean, concise, reusable and scalable code.

Projects

Please find below a *small collection* of my work. I've highlighted my involvement on each project.

ARMATURE Fabric (http://armaturecorp.com)
Accreditation, certification, and quality management software.

Built using cutting-edge Javascript frameworks and tools, this SAAS package utilizes a complex set of microservices, CouchDB to store aggregated data, and Elasticsearch to provide instant search results across the entire platform.

Tech. Used: Microservices   C#   Web API 2   MS SQL   CouchDB   ElasticSearch   Aurelia

Federal Event Management Portal (http://fed-events.com)
Custom-built event management system.

This event management portal allows for the quick and easy setup of completely customizable Federal event-related websites. Includes complete CMS functionality, event registration, and more.

Tech. Used: C#   MVC   MS SQL   HTML/5   CSS/3   TypeScript   UI/UX

Health Indicators Warehouse (HIW)
Data Warehouse of health-related indicators - CDC/NCHS.

The HIW contains data from 125+ sources across 1,200+ health indicators. This project is part of the Data.gov (http://www.data.gov)'s Open Data Initiative (http://www.whitehouse.gov/open) and exposes massive amounts of publicly-consumable health-related data.

Tech. Used: C#   MS SQL   HTML/5   CSS/3   JS   UI/UX

HIW Developers & Services
Over 1,000 RESTful (and SOAP) service methods.

Exposes data from the HIW. Custom CodeGenerator templates were used to generate the service methods and documentation. The system includes a real-time URL builder/service tester and API key registration/verification.

Tech. Used: C#   MS SQL   HTML/5   CSS/3   Bootstrap   JS   Knockout   UI/UX

CodeGenerator (http://quantumconceptscorp.com/Products/CodeGenerator.aspx)
Develop stable, robust and highly versatile software, faster!

This tool allows you and your team to get the nuts and bolts of any project up and running amazingly fast. The backbone of CodeGenerator relies on XML and XSLT. You design an XSL Template once and CodeGenerator handles the rest.

Tech. Used: C#   WinForms   MS SQL   My SQL   UI/UX

Platform Liberty
Empowering candidates in the fight for liberty.

The goal of this project is to provide an inexpensive, easy-to-use web application for liberty candidates. This platform will be available to any candidate who is on the side of liberty - regardless of party their party affiliation. 10+ instances.

Tech. Used: Rails   My SQL   HTML/5   CSS/3   Bootstrap   JS   Knockout   UI/UX

Carson for Congress

Built atop Platform Liberty and customized to fit the needs of Jeffrey Carson's 2014 Congressional campaign.

Tech. Used: Rails   My SQL   HTML/5   CSS/3   Bootstrap   JS   Knockout   UI/UX

AeroBazaar (http://aerobazaar.com)

The most beautiful place to buy and sell aircraft online.

A robust aircraft listing engine allows potential aircraft buyers to easily find what they're looking for. Sellers can manage their inventory and add detailed information for each of their aircraft.

Tech. Used: PHP   My SQL   HTML/5   CSS/3   Bootstrap   JS   Knockout   UI/UX

7Flix (http://quantumconceptscorp.com/Products/7Flix.aspx)

A full-featured Netflix client for Windows Phones.

Although this app is no longer available, since Netflix ditched their public API, it was the most complete Netflix client on the platform at the time. It included queue management features and the ability to search and browse the entire Netflix library.

Tech. Used: C#   Windows Phone   Silverlight   UI/UX

SuperTrition

Online nutritional supplement and fitness store.

A custom e-commerce backend including a full-featured shopping cart with Paypal, Google Checkout, VeriSign Payment Services (now Paypal), UPS and USPS integration. Custom order processor to monitor fulfillment and shipment status.

Tech. Used: C#   MS SQL   HTML/5   CSS/3   JS   UI/UX

Skills & Tech

I am a highly skilled software engineer who prides himself on completing tasks on time while maintaining high quality standards and adhering to software development best practices. I...

– mentor and train junior developers and implement coding standards;

– do everything from infrastructure configuration to backend and frontend design and implementation;

– plan, research, estimate and develop solutions for Federal & State Government and private-sector contracts;

– am responsible for designing and developing sophisticated RESTful API (HealthIndicators.gov (http://healthindicators.gov));

– make and implement high-level decisions regarding overall application architecture, use and design;

– design and develop SQL Server databases; inspect queries and apply performance updates as needed; utilize CouchDB and Elasticsearch database; and

– am constantly learning new technologies, frameworks and tools.

Certifications & Skills

– CMMI for Development v1.3 certified.
– Bottom-up database design and development.
– Project & feature design and development.
– UI design and implementation.
– Clean, organized, efficient, reusable code.
– Automating as much as possible, whenever possible.
– Writing and delivering internal and external documentation, demos, presentations, tutorials, etc.

Technology

– .NET, C#, WebAPI 2, ASP.NET MVC & WebForms, Java
– Node/NPM, JSPM, NuGet
– Aurelia, HTML, CSS/SCSS/LESS, JavaScript, Typescript, jQuery, Bootstrap, Google MDL, Knockout, Highcharts/Highmaps
– Visual Studio, VS Code, Eclipse, NetBeans
– Git, Subversion, TFS/TFVC — view my profile on Github (https://github.com/JoshMcCullough)
– IIS, Apache, Nginx, Tomcat, Weblogic
– Elasticsearch, CouchDB, SQL Server, MySQL, Oracle
– Windows, Linux
– Networking, DNS, server management (Windows, Linux, Amazon Web Services)

Hobbies

– Keeping up with the latest in software development.
– 3D printing — QuantumConcepts on Thingiverse.com (http://www.thingiverse.com/QuantumConcepts/designs).
– General DIY and learning how things work.
– Technology, astronomy, travel, photography.

Work History

Quantum Concepts
11/2008 - Present — Leesburg, Virginia
Owner

- **Currently accepting contract work; please contact me (ContactMe) to get started!**
- Work directly with clients to solve technical problems, improve work-flow, and suggest resolutions.
- Research, design, develop, test and deploy software for mobile devices.
- Write applications using the .NET, .NET Core & the .NET Compact Framework.
- Develop and publicly release custom code-generation tool, CodeGenerator (TheCodeGenerator.com (http://thecodegenerator.com)), which provides a huge boost to team productivity as well as code stability and versatility.

ARMATURE
3/2016 - 3/2018 — Dulles, Virginia
Senior Software Engineer

- Full-stack development using C#, WebApi 2, Elasticsearch, CouchDB and Aurelia.
- Maintain, improve, and add features across a dozen micro-services.
- Design and implement RESTful APIs for large Quality Management system.
- Participate in and lead "dev sessions" sharing new technologies, frameworks, and patterns.

i360
9/2015 - 3/2016 — Arlington, Virginia
Solutions Developer

- Responsible for full stack development (front-end to API to back-end) for fast-paced, large solution.
- Utilize best-practices such as dependency injection, unit testing, continuous testing and continuous integration.
- Create and update internal NuGet packages, Visual Studio extensions, and Visual Studio analyzers (Roslyn) to enforce and enhance development process.

Social & Scientific Systems
5/2010 - 9/2015 — Silver Spring, Maryland
Senior Software Engineer

- Selected amongst hundreds of employees to attend months-long Leadership Training instructed by the executive team.
- Participate in and lead CMMI documentation/appraisals, code reviews, client demos, standups, training sessions.
- Lead developer for the Health Indicators Warehouse (HealthIndicators.gov (http://healthindicators.gov)) and other government and private-sector web applications.
- Senior Developer responsible for system and database design as well as UI design and implementation.
- Work with database team in order to make performance updates (indexes, etc.) and recommend structural changes.
- Develop unified build process and documentation for performing deployments.
- Deploy to QA, UAT and Production environments and manage all servers from initial configuration onward.

Corporate Executive Board
11/2008 - 11/2009 — Arlington, Virginia
Software Consultant

- Full life-cycle design and development for system to generate reports and benchmarks based on survey data.
- Built on ASP.NET 3.5/WebForms, SQL Server 2005/2008, Aspose.Slides (dynamic PPT altering tool), Dundas Charts.
- Survey data consumption, configuration, calculation, and reporting.
- Ability to perform Dynamic Reporting based on user-selected demographic elements.
- Develop web interface wrapper to interact with survey data provider.

Avenity   2/2005 - 4/2010   Reston, Virginia
Senior Software Developer

- Local Government Revenue Management System, .NET Framework:
  - Design, develop, and unit test complex client/server software supplications using both .NET Remoting and Web Services API layers.
  - Utilize and improve a custom code generator to generate data objects and API layers.
  - Implement customizations in external DLLs for each client.
  - Create and enhance SQL Server Reporting Services reports as well as develop Custom (ad-hoc) Reporting engine.
  - Lead developer for related public-facing web site.
  - Design and implement workflow/processing queue.
  - Performance and memory optimization throughout enterprise-level software package.
- Compensation Analysis System, J2EE & Weblogic:
  - Develop complex web application and Windows services using Java/J2EE platform.
  - Create and refine complex SQL queries, stored procedures and views on Oracle platform.
  - Lead developer on multiple software iterations.
- General:
  - Go-to-guy for network and server configuration.
  - Implemented custom VOIP solution (Asterisk).
  - Developed in-house time-tracking system
  - Presented software development training courses to other employees.
  - Excellent evaluations each year.

Education

Champlain College   8/2000 - 12/2004   Burlington, Vermont

- Received a Bachelor Degree in Software Engineering in December 2004.
- Received an Associate Degree in Software Development in December 2003.
- Software-related courses focused on hands-on skills in addition to theory.
- Selected as a tutor in the Programming Lab.

National Institute of Standards and Technology   6/2002 - 8/2002   Gaithersburg, Maryland

- Summer intern at NIST in Information Technology/Biometrics group.
- Worked on Common Biometrics Exchange File Format (CBEFF) project (C++) and contributed to a related paper.
- Received two certificates of accomplishment during my internship.

Contact Me

If you'd like to get in touch with me, please use one of the following methods:

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For a more *interesting* experience, please visit http://JoshMcCullough.me.