

## Matthew E. Fowle

*"Hyper competent, broadly savvy web expert, technical engineer & dedicated technologist"*

B.S. Computer Engineering, University of Maryland College Park, 2005

### PROFESSIONAL EXPERIENCE

**Useful Networks:** Programming lead on Zoombak personal locator device and conjunct web portal. Used Agile/Scrum methodology across new feature release cycles. Drove requirements analysis and implementation design, coordinated team. Additional auxiliary responsibility in test & build automation, tool development, intranet wiki maintainer. 2007-2009.

**303 Software:** Senior Developer, and co-founder, serving as architect and lead developer for numerous AJAX web applications: Thor Travel Services hotel finder, TechSelector product finder, S5! Roofing Calculator, FirstData web payment system. In house administrator, resident web technology/AJAX expert. 2006-2006.

**Technicode Inc.:** Junior Software Developer on three-tier multi-threaded product management and product tracking solution for Water Remediation Technology. In-house Unix and web technology expert. 2006.

**Great Seats Inc.:** Sole developer of decimation based CAPTCHA solving image processor. Late 2005.

**Inhand Electronics:** Summer internship developing a software suite to test all onboard peripherals of outbound handheld platforms. Summer 2003.

**National Institute of Health:** After school internship maintaining and developing publicly available protein sequence analyzers, DNA homology and DNA sequence alignment web applications and server machines on [helix.nih.gov/apps](http://helix.nih.gov/apps). School Years 1999-2001.

**BitWrench Inc.:** Summer internship as a web application developer creating backend administration systems for client websites. Also responsible for maintaining a Solaris-based Flash Generator web machine and for implementing a distributed company-wide network file sharing system. Summer 1999.

**3D Design:** Fabricator and electrician for series of displays for CRRR Trash Museum. Summers 1996-1997.

**Washington Post:** Delivered papers at 6:00 AM to raise money for my first computer. 1995-1997.

### CREATIONS & LABORS

**EveMap-NG:** Map client for EVE Online; implemented order of magnitude speed increase to renderer, inversion of control driven user preferences saving, and interface polish such as drag and drop and homogeneous user-controls.

**Spaces Extension:** Two part experimental web browsing interface in fulfillment of Mozilla Summer Design Challenge 09: a Google Chrome extension to record browsing history to AtomPub server, and a harvester to generate directed graphs of browsing history, and to permit social sharing of web history with other users.

**Archivalist:** Tool to track version control changes for a large number of different projects using different VCS.

**Object Platform:** "Live code"/dynamic typing runtime for existing .NET code, built on code instrumentation.

**Home Automation Network:** Independently developed a microcontroller-based Universal Plug and Play (UPnP) network of automated lights, appliances, and switches. Originally conceived of in high school as a stand-alone light dimmer and brought to fruition across a series of incremental designs and interface enhancements, concluding in a fabbed PCB design, 19.2Kbps RS-485 control network, and an advanced software bridge for network orchestration.

**Digital Video Projector:** Dissected a LCD monitor, removed the backlight, placed the transmissive panel across an overhead projector & jury rigged additional cooling systems, producing an inexpensive digital video projector.

**Convection Oven Controller:** High accuracy oven controller for PCB convection soldering.

### PRIMARY SKILL SET

**Programming Languages:** JavaScript master, Java code slinger, Boo metaprogramming fanatic, Bash zealot, & seasoned veteran of C# , C++, C, Python, Perl, C, PHP, Assembly.

**Environments:** Linux, Maven, Tomcat, ASP.NET, Apache, Lighttpd, Eclipse, gvim, Visual Studios, git, svn.

**Web:** DOM, Ajax, REST, XHTML, SVG, CSS, persistent connections, xpath, xslt, xsd, jQuery, ASP, ASP.NET, JSP, Servlets.

**Databases:** PostgreSQL, MySQL, MS/T-SQL 2000/2005, Oracle, Triggers, O/RM, Hibernate, ADO.NET, DB40, LINQ.

#### Implementation Skills:

Design patterns, UML modeling, OOA/OOD. Agile/Scrum methodology.

Test driven design, unit testing, test automation, web testing. Selenium.

Distributed systems, multi-threaded & asynchronous systems, high availability, message queuing, actor model.

Inversion of control, dependency injection, Spring, AOP, Metaprogramming.

Atom, Atom Publishing Protocol, AtomAPI, RSS, gdata, XMPP/Jabber, OpenID, OAuth, SAML, LDAP.

**Embedded:** Digital circuit design, PCB layout, ARM, MIPS, PIC, Ethernet, FPGA, I2C, JTAG, operating systems.