
RUSSELL “RUSTY” GELDMACHER

SOFTWARE ENGINEER

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Skills

Current

- Web architecture
- Software design
- Automated testing
- Continuous integration
- Agile / Scrum
- C#
- ASP.NET
- SQL
- JavaScript / jQuery
- CSS / HTML5 / XHTML
- Subversion
- IIS
- MS SQL Server
- Visual Studio

Skills

Experience

- C
- Assembly (ARM)
- Python
- Java
- Ruby
- MongoDB
- Linux kernel
- Embedded development
- *nix administration
- Git
- Ruby on Rails
- Eclipse
- Apache

Projects

StickyHabits — <http://www.stickyhabits.com>

My main side project, StickyHabits allows you to track your progress towards creating strong positive habits. Built in Ruby on Rails 3, hosted on an Amazon EC2 Ubuntu 10.10 instance with Ruby 1.9.2 via RVM running on Passenger + Nginx. Data is stored using MongoDB v1.8.

Far from complete, but what exists today is a stable and useful application.

Life in <canvas> — <http://www.geldmacher.net/life>

As an exercise to teach myself a little about how to program using the HTML5 <canvas> element, I created an implementation of Conway's Game of Life.

Career

Velir Studios — Somerville, MA

Principal Developer, October 2009 to Present

Senior Developer, November 2006 - October 2009

- As employee #7, helped grow the company to a 50-person, multi-million dollar consultancy firm with dozens of household-name clients. Gained experience in all aspects of the project lifecycle from the pitch right up through the maintenance contract.
- Lead architect and developer of Velir Datacenter (<http://www.velir.com/expertise/datacenter.shtml>), a data publishing framework and tool suite that currently powers over 15 high-volume websites.
 - Built in ASP.NET and C#, Datacenter allows non-technical users to upload and manage large data sets while allowing programmers to quickly go from blank slate to working site in minimal time
 - A unified database schema and domain model allows Datacenter to represent almost any type of tabular data set without modifying the database. By using this one schema, optimizations could be focused so that all sites built on the platform could be as high-performing as possible.
 - Built from the ground up with performance in mind, Datacenter can handle data sets upwards of 50 million data points without any noticeable degradation in performance. Optimizations from the database layer through the API layer allow for fast data import, retrieval, and visualization.
 - Backed by nearly 2500 NUnit-based tests, the Datacenter code base has stood up for almost four years and though several major refactorings, with regressions being extremely rare.
 - Uses NHibernate as the ORM, along with Spring.NET and a custom service locator to configure dependencies. Administrative system is built mainly on jQuery and various jQuery plugins.
 - Allows administrators to publish data sets and other system objects from a preview database into a public one. The publishing system automatically handles dependency management and maintains relational consistency between the two databases.
- Lead teams on projects from planning and concept, through development and into production. Lead the development effort on dozens on web sites with teams from anywhere between 2 to 6 people. Some of these include:
 - Population Reference Bureau's DataFinder - <http://www.prb.org/datafinder.aspx>
 - Harvard School of Public Health's Diversity Data - <http://www.diversitydata.org>
 - The Meridian Institute - <http://www.merid.org>
 - Kaiser Family Foundation's Global Health Facts - <http://www.globalhealthfacts.org>

- Identified as one of three leading developers in the company to receive the title of Principal. Primary responsibilities include architecting and overseeing the builds on new projects, starting from initial estimation through requirements gathering and on into development. Some of the project I've architected include:
 - [The Dartmouth Atlas of Healthcare](http://www.dartmouthatlas.org) - <http://www.dartmouthatlas.org>
 - Lucile Packard Foundation's [KidsData](http://www.kidsdata.org) - <http://www.kidsdata.org>
 - The Commonwealth Fund's [State Scorecard](http://www.commonwealthfund.org/Maps-and-Data/State-Data-Center/State-Scorecard.aspx) - <http://www.commonwealthfund.org/Maps-and-Data/State-Data-Center/State-Scorecard.aspx>
- Mentored junior developers in C# and general programming best practices. Helped to make integration into the company go as smoothly as possible.
- Helped build a best practices culture in the engineering group. Instituted company-wide adoption of source control, automated testing, a common reusable code library, standardized build system, standard project directory structures, and more.
- Defined the Velir developer interview process and helped refine the peer review process. Using this process we were able to grow the developer base of the company while maintaining a consistently high level of talent.

Intel Corporation — Hudson, MA

Embedded Linux Software Engineer, June 2003 to November 2006

- One of the top embedded Linux and PXA processor experts in areas including boot-up, drivers, optimization and system architecture.
- Development work included doing Linux ports to brand new processors and processor steppings. First to enable new architecture features such as DDR SDRAM and L2 cache.
- Created the original implementation of suspend/resume power management facilities in the Linux kernel for the PXA architecture. That work was accepted into the PXA architecture tree of the mainline Linux kernel.
- Lead role in the team producing and optimizing the operating system for the Motorola A780, one of the first Linux-based smart-phones to ever hit the market.

Worcester Polytechnic Institute — Worcester, MA

Teaching Assistant, August 2001 to May 2002

Intel Corporation — Hudson, MA

Summer Intern, Summers 2000 & 2001

Education Worcester Polytechnic Institute — Worcester, MA

Master of Science - Computer Science

- Graduated May 2003
- Cumulative GPA: 3.7

Worcester Polytechnic Institute — Worcester, MA

Bachelor of Science - Electrical Engineering (Concentration in Computer Engineering)

- Graduated May 2001
- In-major GPA: 4.0, Cumulative GPA: 3.7
- Tau Beta Pi National Engineering Honor Society
- Eta Kappa Nu National Electrical Engineering Honor Society

Other Avid hiker and backpacker

- Completed the [AMC New Hampshire 4,000 footers](#) list in July 2010

Find me on:

- [Stack Overflow](http://stackoverflow.com/users/214112/rusty) - <http://stackoverflow.com/users/214112/rusty>
- [GitHub](http://www.github.com/rustygeldmacher) - <http://www.github.com/rustygeldmacher>
- [Velir Blog](http://blog.velir.com/index.php/author/rusty/) - <http://blog.velir.com/index.php/author/rusty/>
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