

David B. Reilly

Software Engineer

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OBJECTIVE

Provide high-quality development, architecture, services, UI implementation, and/or responsive designs for a friendly organization or company, where attention to detail is a core value, the quality of the work is important, and where creativity in execution and wearing multiple hats is a plus. My ideal job prioritizes collaboration, where trying something new is not discouraged, and is an environment where I can stay in contact with others, teaching and learning, and enjoying the work we do, while delivering top-quality solutions.

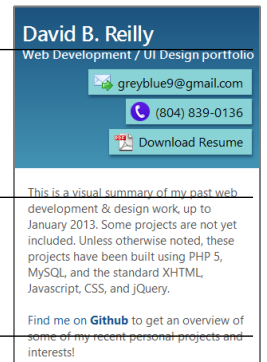
PORTFOLIO

GitHub projects - <https://github.org/greyblue9>
LinkedIn - <https://linkedin.com/in/dbreilly>

EDUCATION

B.S. Computer Engineering, Graduated May 2010, *cum laude*
Virginia Polytechnic Institute & State University (**Virginia Tech**), Blacksburg, VA

EXPERIENCE



Software Engineer for **United Network for Organ Sharing** – Richmond, VA

2015 – present <http://fishcontest.com>

- **Full-stack .NET web development (ASP.NET MVC, C#, VB.NET, etc.)**
 - Maintainer (authoring enhancements and fixes) for line-of-business web applications such as Waitlist[®], DonorNet[®], TIEDI[®], Secure Enterprise[®], used throughout the industry
- **Maintain and write for SQL Server database**
 - Business-critical stored procedures
 - Data corrections and data scripts, update and troubleshoot, data dictionaries
 - Entity framework as well as traditional domain-driven data access models
 - Some data cube development and SQL analytical services work

Full-Stack Web Developer for **FishContest** (soon-to-launch Web startup, with my brother) – Powhatan, VA

1/2014 – 9/2015 <http://fishcontest.com>

- **Full-stack PHP/MySQL + front-end web development**
 - **Extensive front-end work (HTML5, Javascript, jQuery, CSS 2 & 3, Google Maps APIs)** and debugging (**Firebug**, FirePHP, IntelliJIDEA & NetBeans IDE) to deliver a **responsive AJAX-enhanced** suite of fishing-related services and tools, such as adding and maintaining a user fish database, an event feed with recent activity, social networking-like features, and a full-featured search interface with custom Google Maps integration for showing the locations of users, fish, fishing spots, etc. Strong debugging skills have helped both myself and my brother enormously.
 - Back-end **PHP 5.2-5.4** implementation and **MySQL 5 schema** & supporting **SQL** queries. Intimate familiarity with this technology stack and effective skills taught to my brother, the project's founder. familiarity and managed from the ground-up, including a custom dispatcher and framework designed for compatibility with existing code. Extensive MySQL query writing and data sanitization, including the use of MySQLi parameter binding.

HTML/CSS/JS + Java/Grails Developer, Incubation Team Ellucian (formerly Datatel + SunGard Higher Ed.) Fairfax, VA 1–9 / 2013

- **Responsive front-end development** for seamless experience across desktop and mobile browsers
- HTML5, CSS2+3, Javascript, jQuery
- Extensive work with **Grails (Groovy + Spring framework)**, GORM, **Java, JSPs**, Freemarker
- Responsible for developing contacts component (tel. # + name + address) supporting mobile app for college students to access Colleague / Banner data from smartphone
 - Design and implementation of contacts data storage mechanism, front-end for data entry/management, restful API for consumption by smartphone apps
- Main developer and system manager for Grails-based e-transcript cloud app (middleware)
 - Groovy + Grails (a framework built atop Java VM)
 - Interface between existing ERP learning systems (such as Colleague / Banner) and a third party transcript distributor (National Student Clearinghouse)
 - Helped resolve uncertain requirements unclear third-party API support into a coherent technical strategy (RESTful, JSON-oriented middleware to connect existing and yet-unbuilt APIs)
- **Challenges addressed:** presenting a **consistent interface** and internal task flow **despite interconnections with large, vintage systems in fragmented deployment states** using divergent protocols, authentication mechanisms, and data representations

Developed Open, Extensible Python Pac-man Implementation, 3-7/2013 Including Maze Editor (Windows)

Github + Screenshots: <https://github.com/greyblue9/pacman-python>

Pygame Community Page: <http://www.pygame.org/project-Pacman-426-4585.html>

- **Scrolling mazes** (nearly unlimited size) read from ASCII text files in sequence, named with the stage #
- Stages are easily edited with the included **Maze Editor**
 - Maze editor includes a wall “paintbrush”, symmetric editing mode, and color scheme dialog
- **Custom color schemes** per-maze (**tileset is dynamically generated** on-the-fly at the start of each stage)
- **A* (A-star) path-finding implementation** enables:
 - Ghosts to chase Pac-man (Inky, Pinky, Blinky, and Sue / Clyde)
 - Per-level fruit to bounce in and out of doorways

Full-stack web developer for Koofers.com – Reston, VA

12/2007 - 5/2010 (part-time), 5/2010 - 11/2012 (full-time) <<http://www.koofers.com/>>

- Senior Software Developer, 3/12 - 11/12; Software Developer, 5/10 - 3/12; Intern 12/07 – 5/10
- **Front-end development** with **Javascript, jQuery, CSS, XHTML, jQuery Mobile, Facebook API**
- Back-end development using **PHP 5, MySQL, some Python scripting**
- Developed **full-featured iOS mobile app** to fetch flashcard data and provide interactive flashcard quizzes to students on the go
- **Extensive MySQL query writing**, database administration, **database schema design**, and schema maintenance/extension. **SQL** report generation, and **advanced custom reports** delivered in Excel based on custom SQL data pulls in response to business requests.
- Worked with **Amazon EC2** on LAMP stack
- **Developed and maintained Facebook Platform** classes and database support including a variety of **Facebook integration** points
- **Extensive Agile** development experience
- Heavily used and extended our Custom **MVC framework** to dispatch web requests with **fully-editorial, SEO-oriented URL structure** supported by **Apache URL rewriting**

Many other personal programming projects for recreation and self-education including:

- Arcade-style pacman game (Python)
- Nested task/to-do list (PHP/JS)
- "Speed dial" web home with tagging (in progress)

SKILLS

Very strong knowledge –

HTML5 (with tidy markup), **CSS 2+3**, building **mobile-friendly, responsive** HTML documents supported by CSS media queries, modern **Javascript feature detection**, and **understanding of virtual viewports** such as those used in mobile browser implementations

Javascript and **jQuery** – much experience building advanced single-page web apps with rich interfaces

Cross-Browser Debugging and **Extensive Firebug** experience; intimate familiarity with how to use it to code and debug web applications, **Fiddler4** and **CURL**, and Firebug extension via plugins. Have written many custom user-scripts (called “extensions” in Chrome) to improve experience at various web sites or reduce repetitive tasks.

PHP 5, -- years of continuous practice + deep familiarity with the available toolset

MySQL & SQLite3 -- query syntax, aggregate functions, inner & outer joins, self-joining tables, sub-queries, and parameterized MySQL bindings in PHP

Java Web Servlets, Tomcat, Spring Hibernate 3 ORM, JSPs, -- turned mock-ups and PSDs into working web pages

C# .NET (and **Visual Basic 6.0**) -- developed many desktop utilities as well as an entire webserver for an engineering project and a couple of local network service applications

Regular Expressions, Shell scripting, the GNU toolchain (esp. **sed & awk**)

Android – deep understanding of the technical workings, especially Intents used for Inter-process communication and activities, and manipulating Android services & components.

Inside-out understanding of HTTP and web protocols including **web application security**:

I would not be able to work effectively without the nuts-and-bolts understanding of the Web and computing that I have acquired with fascination over my lifetime. Almost daily, I find it beneficial or even necessary to debug, inspect the traffic of, or work around problems in third-party software, websites, closed APIs, etc., and I have developed an eye to anticipate common design and coding errors in websites, and the tell-tale signs they may be present. I also take any opportunity I can to save others from past headaches or current technology burdens.

Working knowledge of Python (2.x), Groovy & Grails, C, C++, Perl

Favorite Tools – **IntelliJ IDEA, Firebug, Git**, Rhino Javascript engine, NetBeans IDE, TortoiseSVN / TortoiseGit, Inkscape, Paint Shop Pro, Windows 7, ClipX, AutoHotKey, GridMove

Other

- Very adept at **implementing modern web designs** (Live HTML+CSS from mockups or concepts)
- **Deep understanding of TCP/IP**, ports, connection establishment, network application structure
- **Skilled writer** for **technical** and **general audiences**
- **Graphics/layout design, vector+raster drawing**
- **Color palettes**, schemes, and **extracting assets** from images, and **adding missing graphics data**
- Precise yet accessible writing style for software manuals or “how-to”-s
- A love of music, piano playing, and electronic music composition
- Microcontrollers, computer/physical control interfaces, and discrete electronic components