

# Patrick W Carroll

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<http://github.com/patrickomatic>      <http://patrickomatic.com>

EDUCATION      **University of Maryland, Baltimore County**  
Bachelor of Computer Science, December 2007

PROFESSIONAL EXPERIENCE      **Webs Inc.**, Silver Spring, Maryland      <http://webs.com>  
*Senior Web Developer*      **February 2008 – The Present**

Develop web-based applications for use by Webs.com users. Tasks performed at Webs.com make extensive use of Java, JavaScript, Groovy, Python and Bash scripting.

*Accomplishments include:*

- Research and development of a prototype for running a Rails 3 app within an existing Tomcat application. The Rails app was run using JRuby, packaged using warbler and integrated into the Spring MVC application using SiteMesh and a custom Java Servlet.
- Design and implementation of the Webs.com REST API. The design includes implementing the OAuth 2.0 protocol for authorization as well as supporting both XML and JSON data representations decided based on content negotiation. I used the Grails framework to handle requests and marshal native objects to and from XML and JSON. I also implemented simple client libraries in both Java and Ruby.
  - Webs REST API documentation: [http://wiki.developers.webs.com/wiki/REST\\_API](http://wiki.developers.webs.com/wiki/REST_API)
  - webs-api-client-java: <https://github.com/websdotcom/webs-api-client-java>
  - webs-api-client-ruby: <https://github.com/websdotcom/webs-api-client-ruby>
- Integrated the Webs.com platform with Facebook Connect. This allowed users to log in via their Facebook accounts and post status updates and general activities to their Facebook feed.
- Led the development effort to allow Webs.com to be used as a white-label service for third parties. Consisted of extending the authentication mechanism to allow for authentication through third party sources. Also created services for managing various branding aspects of the site as well as allowing for custom templates.
- Refactored several core legacy classes to use Hibernate for persistence as well as moving to an MVC and Service/DAO pattern.
- Distributed image processing system used by all Webs.com sites for thumbnails and general image manipulation. Consisted of several servers written in Python which receive JSON requests from clients and perform the desired image modification.
- Development of subscription management applications to provide Webs.com users with a system for managing the members and permissions of their site. Consisted of writing two new applications using Spring MVC and Hibernate as well as migrating old code to use the new system. This system has been scaled to meet the demands of millions of users as well as providing a single sign-on system for all Webs.com users.
- Java-based calendar application with support for multi-day and recurring events. Developed using the Spring MVC framework, Tomcat webserver and Hibernate persistence layer.
- Installed and configured Nagios server monitoring software.
- Assisted in interviewing the majority of new candidates for the engineering team.

**urlimg.com,**

<http://urlimg.com>

*Founder and Developer*

I designed, implemented and launched urlimg.com as a general-purpose, web-based image manipulation tool. It works by taking requests for image transformations via URLs which can be embedded in HTML tags. It was built using Python, Django and PostgreSQL.

- Open sourced the core functionality as a reusable Django app.

<http://github.com/patrickomatic/django-url-imaging>

**reddithomebrewing.com,**

<http://reddithomebrewing.com>

As an active moderator of the Homebrewing section of reddit.com, there was a need for an online judging/registration system to handle our yearly homebrew contest. I developed reddithomebrewing.com as a PostgreSQL-backed Django application where reddit users can join the current year's homebrew contest, judges can enter ratings/scores and the contest results and winners can be displayed. Functionality was also added to allow users to specify their relative homebrewing "experience level" which will show up as a small icon when they post on reddit.com.

- The application is available as open source:

<http://github.com/patrickomatic/reddit-homebrewing>

**Internet Connection, Easton, Maryland**

<http://internetconnection.net>

*Developer and UNIX System Administrator*

**August 2001 – August 2007**

Began work at Internet Connection as a Support Technician while still in high school. After working for 1 and a half to 2 years, I began working on various programming projects and system administration tasks covering a wide spectrum of problems.

*Accomplishments include:*

- A web-based JavaScript application which communicates with a Common Lisp server that allows a user to take a screenshot of a webpage and then to provide text and paint tools for modifying the screenshot.

<http://www.gethive.com>

- A web-based JavaScript/XML-RPC application which communicates with a Python CGI allowing customers to build and manipulate live shopping carts.

<http://internetconnection.net/netSHOP/>

- Implementation of Microsoft FrontPage Server extensions which can run on a UNIX server.
- Construction of several Apache modules which I also later ported to run on Apache 2.
- A centralized system for maintaining and distributing UNIX initialization scripts.
- Java application and applet allowing users of email accounts to remotely modify settings of their accounts.
- Rebuilding of a web-based account management system which provided functionality for manipulating users for email and FTP access, email forwards, mailing lists, installed packages, log file analysis and various other website tools.

<http://internetconnection.net/netCONSOLE/>

COMPUTER  
SKILLS

- Programming Languages: Python, Perl, Java, Ruby, Groovy, Common Lisp, Shell scripting with Bash, JavaScript, C, C++, Haskell, x86 Assembly, PHP, Erlang
- Software: Linux, Solaris, Ant, Django, Spring Framework, Hibernate, Rails, Grails, CVS, SVN, git, gcc, make, ethereal, nmap, Apache, Qmail, m4, Oracle, PostgreSQL
- Technologies: SQL, XML, XML-RPC, HTML, Cascading Style Sheets, L<sup>A</sup>T<sub>E</sub>X, OpenGL, RenderMan, Arduino
- Hardware: x86 IBM/PC, x86-64, Sun Sparc, DEC Alpha, Atmel AVR

REFERENCES

*Available upon request.*