Matthew Hielscher

Portfolio, GitHub, and social media at: http://wasabiflux.org/
818-389-4254

WORK EXPERIENCE

Backend Developer　　　　*California Security Agency*　　　　April 2013 – present
- Built PHP backend with SQL ORM, authentication, media uploads, account management.
- Designed REST-like API for AJAX calls.
- Scripted automatic daily report compilation emailed to clients.
- Managed CentOS 5 VPS with LAMP stack and one-touch deployment with Fabric.

Freelance Programmer　　　　*Self-employed*　　　　November 2012 – present
- Created *Taskbook* feature for **EVALS.net**, a critical component in securing multiple large municipal contracts.
- Designed and built **Pictoral.org** search engine, including n-gram indexer and crawlers.
- Added parsing for older XML and APS formats of patent grant data to existing parser script.

Junior Programmer　　　　*FileYourTaxes.com*　　　　June 2005 – May 2006
- Developed e-filing logic and interface in Perl to match state tax return specifications.
- Built an extension to tax preparation system to allow on-the-fly extraction of compressed archived client data across a distributed network of servers.
- Designed secure network device to function as a firewall and safe fileserver for sensitive data. Implemented redundant security features, automatic proprietary software updates, and web configuration interface.
- Developed web server log analysis tool with PHP and Perl.
- Managed workstations and server running Red Hat Enterprise. Managed NIS with Samba.

PROJECTS

QCOChat　　　　*HTML5, Javascript, WebRTC*　　　　February 2013 – present

Video conferencing and chat web app using WebRTC. Under development to replace TinyChat as a hangout for a group of friends.

Simplebot　　　　*Python*　　　　September 2009 – February 2010

IRC bot for channel moderation and reference, with access to Google, Wikipedia, and pastebin.com. Runtime loadable command modules, user authentication and access levels, XML configuration.

EigenMaze　　　　*Java*　　　　January 2005 – March 2005

3D OpenGL networked game engine. Included deathmatch and capture the flag modes. Designed and developed from scratch over 10 weeks in an Agile team environment.

Aleph One　　　　*C++*　　　　March 2000 – July 2003

Implemented the *Lua* scripting language in the game engine to allow greater scenario creation control. Added graphical enhancements: more resolutions, fog effect control; and XML configuration options.

DISTINCTIONS AND ACTIVITIES

- Ranked 5th of 49 teams in 2008, 10th of 62 in 2004 *Southern California Regionals* of the *ACM International Collegiate Programming Contest*, personally solving optimizaton and **computational geometry** challenges.
- Organized and administered 2005, 2006, 2008 UCSB ACM Programming Contests.
- Placed 2nd in PuzzleCrunch 2006, hosted by UIUC. Participated in Puzzlecrack 2005, 2006.

EDUCATION

Bachelor of Science (inc.), Computer Science　　　　148 of 180 units completed
University of California, Santa Barbara　　　　2003 – 2009