Matt Hielscher

Portfolio, projects, and social media at: https://wasabiflux.org/
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WORK EXPERIENCE

Independent Software Developer   *Self-Employed*   November 2012 – present

- Created "Taskbook" feature for EVALS, a critical component in securing multiple large municipal contracts.
- Designed and built Pictoral.org Facebook search engine, including indexer and crawlers.
- Wrote batch YouTube search scraper to keep accurate view counts on AlexanderPerls.com.
- Added parsing for older XML and APS formats of patent grant data to existing parser script.

Engineer   *Stone Cobra*   August 2015 – October 2015

- Worked with client to create VPN tunnel between their Cisco router and our Juniper router.
- Implemented session-persistent load balancer with nginx for HTTPS connections on that VPN.
- Backed consultants to asymmetrically insert a Cisco ASA router for compatibility.

Backend Developer   *California Security Agency*   April 2013 – August 2014

- Built PHP backend with ORM, authentication, media uploads, account management.
- Designed RESTful API for AJAX calls.
- Scripted automatic daily report compilation emailed to clients.
- Optimized MySQL database schema and SQL statements.
- Managed CentOS 5 VPS with LAMP stack and one-touch deployment with Fabric.

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.

SELECTED PROJECTS

Simulist   *Python*   July 2015 – present

Monte Carlo waiting list simulation for estimating chances of receiving a kidney transplant in any year. Based on center-specific annual statistics from the Scientific Registry of Transplant Recipients.

Aggr   *Django*   September 2012

Web application for aggregating, filtering, and reading RSS and Atom feeds. Inspired by the need to filter and track job postings across many sites.

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.

Robot Arena   *C++, Java*   October 2008 – December 2008

Simulation of intelligent competitive agents using various AI algorithms and parameterization improved by genetic algorithms. GUI in Java, backend in C++.

See more of my projects on my website and GitHub.

EDUCATION

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