David Pagurek van Mossel

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University of Waterloo Software Engineering

Skills

- Demonstrated expertise with **HTML, CSS, JavaScript, ActionScript,** and **Regular Expressions**
- Extensive experience with **Git, C++, Perl, Python, PHP, Linux, SQL, Excel,** and **the LAMPP stack**
- Passion for creative approaches to visual and algorithmic design problems
- Highly proficient with Photoshop and Flash for animation and design from seven years of animation projects
- Enthusiastic, self-motivated learner and active team contributor

Selected Projects

Source code for projects can be found on GitHub: github.com/pahgawk

Trestle, a light, extensible Apache and Perl content management system, 2014

- Created Perl modules to route and display pages, caching content for fast delivery
- Created a Perl admin interface to edit pages and to upload and automatically resize images

Twitch Plays Scribbler Bot, a game where many users collaboratively try to control a robot, 2014

- Developed a system to connect users to a Node.js server using Socket.io and send images from the robot back to the users using OpenCV and Python

CodeNext, a tool to figure out what to learn next, made at the Y Combinator Hackathon, 2014

- Designed and developed the website using HTML/CSS, JavaScript, and PHP/MySQL

MathSolver, a graphing calculator web app and JavaScript algebra/calculus library, 2013-2014

- Created a Computer Algebra System in JavaScript capable of symbolic differentiation using a recursive algorithm
- Created a graphing calculator interface for the CAS using HTML/CSS and JavaScript

Random Bad Jokes, a web database of user-submitted bad jokes, 2013

- Designed and developed an interface using PHP, HTML/CSS, and Javascript to read and write jokes from a MySQL database

Towers of Hanoi, an interactive game and solver for the classic puzzle, 2013

- Created a stack and linked list to store the towers and a recursive algorithm to solve the puzzle using C++
- Developed a drag-and-drop interface for the game using Allegro

Work and Volunteer Experience

Developer, **SpurStart** (volunteer), 2014

- Created a Chrome app, extension, and native app for UI, website blocking, and program launching, respectively
- Developed the website to sign up for updates using HTML/CSS, JavaScript, and PHP/MySQL, implementing AJAX and hashing

Organizer, **Newgrounds Annual Tournament of Animation Collaborations** (volunteer), 2013-2014
- Managed 10-20 animators to create cartoons about a theme
- Created an extensible menu system in ActionScript 3

Instructor, **Virtual Ventures Camp**, Faculty of Engineering, Carleton University, 2012-2013
- Taught groups of 20 students in grades 1-3 about programming and engineering

Leader, **Lisgar Tech Competition Club** (volunteer), 2010-2014
- Taught students in grades 9-12 about video editing, animation, graphic design, and game design for competitions

Creative Interests

Newgrounds Annual Tournament of Animation, 2012-2013
- Achieved second Place, 2013. Received two Daily Feature awards, a Daily Second award, a Daily Third award, a Weekly First award, a Weekly Fourth award, and a Review Crew Pick award throughout the competition.
- Achieved second place, 2012. Received four Daily Feature awards, a Daily Second award and a Weekly Fourth award throughout the competition.

Skills Canada 2D Character Animation competition, 2009-2014
- Achieved silver, provincial level; silver, regional level; 2014
- Achieved silver, national level; gold, provincial level; gold, regional level; 2013
- Achieved gold, regional level, 2012
- Achieved bronze, national level; gold, provincial level; gold, regional level; 2011

Flutist, 2009-2015
- University of Waterloo Concert Band Club, 2014-2015
- Lisgar Collegiate Wind Ensemble, 2012-2014
- Lisgar Collegiate Senior Orchestra, 2013-2014

Education
- Candidate for Bachelor of Software Engineering, University of Waterloo, Class of 2019
- Lisgar Collegiate Institute, Ottawa, class of 2014

Academic Awards
- Received the University of Waterloo President's Scholarship, 2014
- Received top 25% distinction on the Canadian Computing Competition, senior division, 2013 - 2014
- Received the Jerry Dermer Memorial Prize in Engineering, 2014
- Received the Ottawa-Carleton District School Board Silver Medal, 2010-2014