

# David Pagurek van Mossel

University of Waterloo Software Engineering Class of 2019

## 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 Adobe Photoshop and Flash for 2D animation and design from seven years of animation projects
- Enthusiastic, self-motivated learner and active team contributor

## Contact

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## Education

- Candidate for Bachelor of Software Engineering, University of Waterloo
- Lisgar Collegiate Institute, class of 2014

## Past Projects

Source code for most projects can be found on GitHub: [github.com/pahgawk](https://github.com/pahgawk)

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

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

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

- Developed a system for 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

**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

## **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