

Education

Rochester Institute of Technology, Bachelor of Science in Computer Engineering, 3.75 GPA 2008-2013
Minors in Web Development and Electrical Engineering
Honors Program member, Treasurer, and Lead Orientation Mentor
President and Vice-President of Running Club, President of Quidditch Club

Skills

MVC, unit testing, debugging, Unix, Ajax, jQuery, Adobe Creative Suite
Languages – C, C++, Java, JavaScript, PHP, HTML, CSS, SQL, Ruby (with basic Rails), Lisp, Python, SASS/SCSS

Work Experience

Software Engineer Co-op, *Fluxx Labs, LLC* Fall 2013

- Added features used by dozens of clients to the product, using Ruby on Rails and JavaScript.
- Wrote a script to access Amazon Web Services, which streamlined the process of importing new client documents to the product.

High-Speed Processing Co-op, *National Security Agency* 2011-2012

- Developed and maintained Ruby scripts, which are being used as a completion requirement for mission components.
- Validated data byte-by-byte against a proprietary data format to ensure mission stability.
- Manually parsed XML schemas to validate proprietary data against them.
- Converted data to and from this proprietary data format and XML.

Key Management Co-op, *National Security Agency* 2011

- Worked on the software team to build a randomizer for key generation.
- Wrote a module in C that facilitated inter-processor communication on a PCIe board.
- Overhauled the program flow of a module that checks how random a set of random data is.
- Completed a module to compute the Secure Hash Algorithm (SHA-2) hash of random data.
- Created a system in VHDL to modify the contents of a block of memory.

Relevant Projects

Multiplayer Web-based Cribbage Game, *Web Development Minor Capstone Project* 2013

- Designed and developed a turn-based multiplayer game using Ajax.
- Constructed game, challenge system, and chat using HTML, SVG and JavaScript.
- Sent data to and from the server using a service-oriented architecture and a RESTful interface to reduce coupling between the front- and back-end.
- Thoroughly performed unit and integration tests to ensure data integrity and to avoid cheating.
- Try it out at <http://joshkra.me/r/cribbage>

Java Vending Machine Interface, *Software Engineering Course* 2013

- Project Manager for a 10-week, 5-person project with 1,200 lines of code.
- Communicated with a customer to clarify project requirements and scope, modifying project requirements as necessary to remain agile.
- Completed thorough unit, integration, and acceptance tests to ensure functionality and customer satisfaction.

Facial Recognition Control Panel with Facebook Integration, *Senior Design Project* 2013

- Built an interface to add and remove users from a facial recognition system.
- Integrated the system with Facebook to allow facial profiles to be built from Facebook images.
- Preprocessed images with multiple people to ensure the correct person gets recognized.