

# SIMON KRAFFT

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Personal Website / Portfolio: [krafftsimon.com](http://krafftsimon.com)

## SOFTWARE ENGINEER

Innovative Software Engineer offering skills in Java, JavaScript, and C++ development, data structures, algorithms, design principles, complexity theory. Provide familiarity and experience with Modern Front-End frameworks like Angular and React. Present a desire to learn new technology and enjoy interacting with customers. Consistently take initiative when given creative license. Collaborate with clients and internal engineering/product and design teams to gather requirements.

## EDUCATION AND PROFESSIONAL DEVELOPMENT

- **Offensive Security Certified Professional (OSCP) – Expected April 2018** – Hands-on penetration testing certification.
- **BACHELOR OF SCIENCE – COMPUTER ENGINEERING – 2017**, McGill University, Montreal, Quebec, Canada
- **Relevant Coursework:** *Communication Systems, Telecommunication Networks, Microelectronics, Control Systems, Algorithms and Data Structures, Operating Systems, Software QA, Digital System Design, Microprocessors, Software Engineering, Design Principles and Methods, Computer Architecture*
- **FRENCH BACCALAUREAT S – OIB w/merit**, FASNY, New York, NY

## PROJECTS

- ✓ **Penetration Testing with Kali Linux:** Introduction to latest hacking tools and techniques. Virtual penetration testing labs with vulnerable networks are available to practice.
- ✓ **Mean Stack Web App:** Website utilizing Angular 4 on the front end, Node.js and Express.js on the backend, and MongoDB. Allows user to create an account, log-in, generate a gym program, and save their progress (Available at [gainz-tracker.com](http://gainz-tracker.com)).
- ✓ **Online Multiplayer game:** Pong mini-game created using socket.io. Authoritative server architecture to prevent cheating. Uses various techniques to hide the latency from the player (Available at [pong.krafftsimon.com](http://pong.krafftsimon.com)).
- ✓ **Java Development:** Worked on a team project to design a Bomberman game from scratch, including UI.
- ✓ **Electronics:** Developed a low-cost, passive, chipless, humidity sensing RFID tag
- ✓ **Computer Architecture:** Designed a five-stage pipelined MIPS processor in VHDL with branch prediction (1-bit or 2-bit), forwarding, and hazard detection.
- ✓ **Fractal Rendering:** Created website to visualize the Mandelbrot Set. Allows the user to zoom in and change various parameters (Available at [fractal.krafftsimon.com](http://fractal.krafftsimon.com)).

## PROFESSIONAL INTERNSHIP

*Christofle Silver, Inc., New York City, New York (summer 2013)*

### MARKETING CLERK / INTERN

- Updated and Re-designed parts of the store catalog using Adobe InDesign and Photoshop.
- Served on the design team, and learned to utilize colors to influence customers purchases.
- Submitted a new design and decoration pattern in-store.

## TECHNOLOGY

**Programming:** JavaScript, HTML, CSS, TypeScript, Java, C++, VHDL, Python (Limited Experience – Assembly - MIPS, ARM).

**Web Development:** Angular 5, React, Redux, Express.js, Node.js, MongoDB, Socket.io (Limited Experience – GCE, AWS).

**Microelectronics:** Various circuit design, including Electrocardiography Measurement Circuit, Op-amp, and AM receiver.

## HONORS AND ACHIEVEMENTS

Placed 345<sup>th</sup> out of 30,577 participants in the “Kangourou des Mathématiques” math competition.