

# SIMON KRAFFT

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## SOFTWARE ENGINEER

Innovative Software Engineer offering skills in Java/Javascript/C++ development, data structures, algorithms and design principles. Provide familiarity with complexity theory and databases, and experience with a variety of programming languages. 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. Build and integrate applications with CSS, HTML, JavaScript and jQuery, among others. Improve the user experience and functionality for tools. Write testable code utilizing common testing frameworks.

## EDUCATION AND PROFESSIONAL DEVELOPMENT

**BACHELOR OF SCIENCE – COMPUTER ENGINEERING**, 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

- ✓ **Web Application Utilizing Mean Stack:** Constructed a website utilizing Angular 4 on the front end, Node.js and Express on the backend, and MongoDB. (Available at [gainz-tracker.com](http://gainz-tracker.com))
- ✓ **Java Development:** Worked on a team project to design a Bomberman game from scratch, including UI.
- ✓ **Robotics:** Worked on a team project to design a robot. Achieved 3<sup>rd</sup> place out of 20+ teams.
- ✓ **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.
- ✓ **Internet of Things:** Read data from an accelerometer, transfer data using UART connection, send data to mobile phone using Bluetooth, transfer the data to an AWS bucket and process it.
- ✓ **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 (2009 and 2010)

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

**Web Development:** Angular 4, Express, Node.js, MongoDB

**Simulation Program w/Integrated Circuit Emphasis (SPICE):** Various circuit design, including Electrocardiography Measurement Circuit, Op-amp, AM receiver

## HONORS AND ACHIEVEMENTS

Placed 345<sup>th</sup> out of 30,577 participants in the Kangourou des mathematiques math competition