SIMON KRAFFT

Eastchester, New York | 914.620.7262 | krafftsimon@gmail.com
Personal Website / Portfolio: krafftsimon.com **–** *Github*: github.com/krafftsimon

SOFTWARE ENGINEER

I am an innovative Software Engineer offering coding experience with Java, JavaScript, Python, and C++ development, as well as knowledge about data structures, algorithms, design principles, and complexity theory. I have significant exposure to modern Front-End frameworks like Angular and React. I am eager to learn new technologies and enjoy interacting with customers. I consistently take initiative when given creative license. I am comfortable collaborating with clients and internal engineering/product and design teams to gather requirements.

EDUCATION AND PROFESSIONAL DEVELOPMENT

- **OFFENSIVE SECURITY CERTIFIED PROFESSIONAL (OSCP) – Expected April 2018**
- **BACHELOR OF SCIENCE – COMPUTER ENGINEERING – 2017**, McGill University, Montreal, Quebec, Canada
- *Relevant Coursework: Algorithms and Data Structures, Operating Systems, Telecommunication Networks, Software QA, Design Principles, Computer Architecture, Microelectronics, Digital System Design, Microprocessors*

PROJECTS

- **Penetration Testing with Kali Linux:** introduced to the latest hacking tools and techniques; covered and applied different network penetration strategies through an online course and fake vulnerable networks.
- *Mean Stack Web App:* wrote a single-page web application with Angular 4, using Express.js (Node.js) on the server and MongoDB as the DBMS. The application includes Authn/Authz functionality and allows the user to generate a workout routine and track/save their progress (available at gainz-tracker.com).
- *Online Multiplayer* **game**: created a Pong mini-game using socket.io; implemented an authoritative server architecture to prevent cheating; analyzed network patterns and profiled the client-server interactions to reduce latency and improve gameplay experience (available at pong.krafftsimon.com).
- *Java Development:* worked on a team project to design a Bomberman game from scratch, including the UI; applied the agile pattern and lead/managed week-long sprints for a 5 person team.
- *Fractal Rendering:* created a website to visualize iterated transformations of numbers in the complex plane and approximate their divergence; used the HTML5 Canvas API to provide a fast rendering mechanism and interactive interface (available at fractal.krafftsimon.com).
- *Computer Architecture:* lead a team of 4 to design a five-stage pipelined MIPS processor in VHDL with branch prediction (1-bit or 2-bit), forwarding, and hazard detection.

The above-mentioned web applications are backed by the same Linux VM on Google Compute Engine and use a reverse-proxy to route requests to the right application.

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.

TECHNOLOGIES

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).

HONORS AND ACHIEVEMENTS

Placed 345th out of 30,577 participants in the "Kangourou des Mathématiques" math competition.