RYAN **KELSEY**

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Skills

Languages	Python, C, PHP, HTML5/CSS3, JavaScript, Java, MySQL
Tools	Bash, Git, Firebase, MS apps (excel, word, etc.), Visual Studio code, Junit, Docker
Transferable Skills	Problem solving, communication skills, time management, ability to work well under pressure.

Work Experience

Full Stack Web Developer *Apr. 2022 - Aug. 2022*

Ontario Soil and Crop Improvement Association *Guelph, ON*

- Utilized HTML5, PHP, CSS3, SQL, and JS to create or optimize several components of OSCIA's website.
- Developed web applications to assist coworkers with day-to-day tasks (automatically creating finance excel tables from membership data, tool to scan over 100 pages for dead/incorrect links, and more)
- Worked alongside graphic designers in a site redesign for a more visually appealing front-end (can be seen at ontariosoilcrop.org).
- Built queries and functions to standardize many aspects of the SQL database storing user information - saving space and improving multiple SPA load speeds.

IT Web Developer *Jan. 2022 - Apr. 2022*

Ontario Soil and Crop Improvement Association *Guelph, ON*

- Debugged and tested various aspects of the website and database.
- Assisted with the release of new features and various IT operations.
- Brainstormed, implemented, tested, and released new features.
- Used analysis tools such as Google Lighthouse to improve page load speeds.

Education

Bachelor of Engineering, Computer Engineering *Sept. 2019 - Apr. 2024*

University of Guelph, Ontario, Canada

- Dean's Honours list (+80% average) F21 onwards. most recent term GPA: 89%
- Coursework focused on: Software development and integration, systems design, re-configurable computing, operating systems.

Academic and Personal Projects

Home Intruder System *µC/OS-III, FreeRTOS*

- Developed using a combination of hardware (STM32 board, motion sensors & camera module w/ SPI interface), and software (µC/OS-III kernel, FreeRTOS) this real-time home intruder system captures and stores videos when an intruder is detected.
- By using task scheduling and other OS principles this project maximized efficiency and can ensure the important deadline of detecting intruders is met.

GPS server w/ GUI and DB *C, JS, HTML, MySQL*

- Users can upload GPS files, where a built-in parser would extract and visualize the data. The user could also store, extract, and manipulate the visualized GPS data.
- This project entails C and JS for the backend, HTML/CSS for the front end, and a cloud hosted MySQL database for storing user data.

Sumo Bot *C, Arduino*

- Worked alongside a partner, we developed a self-controlled sumo-bot, a small robot that would attempt to push other bots out of a ring.
- All stages of development, from prototyping designs to final implementation, was completed in-house.
- Used an Arduino, multiple sonar sensors, and two high torque motors, along with thermoformable plastics for the chassis.

Game Library *Python*

- Developed various games (blackjack, roulette, hangman) with Python. User would have simulated money and gamble until it ran out.