Amelia Kemp

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EDUCATION

University of Waterloo, *Bachelor of Software Engineering* *Expected May 2028*

- University of Waterloo President's Scholarship of Distinction ($2,000)
- Relevant Coursework: Data Structures (**C++**), Intro to Compilers (**C**), Data Abstraction
- GPA: 84% (3.7/4.0)

SKILLS AND CERTIFICATIONS

Languages: C/C++, JavaScript/TypeScript, Python, HTML, CSS, VHDL, Assembly
Tools/Other: Git, Bash, Unix, Linux, Arduino, iPerf3, Flent, Azure
Certifications: Microsoft Certified: Azure AI Fundamentals, Microsoft Certified: Azure Fundamentals

EXPERIENCE

UW Orbital Firmware Developer Waterloo, ON | September 2024 - present
University of Waterloo Satellite Design Team

- Wrote low-level embedded software for a LEO satellite and software for ground station communications in **C**
- Implemented a driver for a temperature sensor and a minimal thermal management system using **FreeRTOS**

Networking Research Associate Ottawa, ON | June - August 2024
Algonquin College Applied Research

- Researched techniques for achieving low latency, low loss, and scalable throughput of packets in networks
- Benchmarked various **Linux** source trees using **iPerf3** to identify optimal congestion control configurations
- Built a testing network with PCs, routers, and switches for **optimizing WiFi 7** performance

Freelance Web Developer Ottawa, ON | July 2023
University of Ottawa Department of Anesthesiology and Pain Medicine

- Created an interactive map using the **LeafletJS** library to show where faculty members have presented talks
- Published data of **100+ presentations in 30+ cities** to the University of Ottawa 2023 annual report website

PROJECTS

Product Joy Predictor - Chrome Extension

- Used the Laplacian Succession Theorem to show the probability of a user enjoying a product
- Built a Chrome extension for Amazon.ca and Amazon.com using **JavaScript**
- Deployed to the Chrome Web Store with 8 users

WeatherBox

- Built a display simulating real-time weather using embedded code from an Arduino to a microcontroller
- Used **C/C++, ArduinoIDE,** electric circuits, and LED strips to realistically mimic the sun's movement, colour, and light intensity according to the time of day and weather conditions

Personal Website

- Designed and developed a personal website with **HTML, CSS, and JavaScript** to showcase software projects
- Employed version control with **Git and GitHub**, published the website using a custom domain

Etch-A-Sketch and Rock Paper Scissors Games

- Developed a suite of two interactive web games using **HTML, CSS, and JavaScript**