Mary Keyes

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Highlight of Qualifications

- Enrolled in level 3 of McMaster University's Computer Engineering Co-op Program, eligible for **4-, 8-, and 12-month** co-op positions starting Sept 2026
- Strong proficiency in embedded software and firmware through internships and courses
- Demonstrated ability in cloud and network infrastructure and protocols in project work
- Proven communication skills shown in industry experience and extracurricular design team

Education

Bachelor of Engineering Co-op (BEng) | *Computer Engineering* *2023 – 2028*

McMaster University

Relevant Coursework:

- **Digital Systems Design:** Verilog, synthesis & verification, design methodology, algorithms in hardware
- **Algorithm Analysis & Design:** Sets, graph theory, trees, NP completeness, dynamic programming
- **Software Development:** CI/CD, bash, Git, performance analysis, optimization, collaborative workflows

Experience

Network Engineering Intern | *XYZ Telecommunications, Toronto* *May 2026 – Present*

- Achieved a 20% improvement in network performance by implementing advanced network monitoring tools (e.g., **Wireshark**, **Nagios**) and optimizing existing infrastructure
- Collaborated with senior engineers to design and deploy a new **VoIP system**, highlighting communication skills that improved efficiency across the organization
- Conducted regular network security audits, identifying and resolving potential vulnerabilities to enhance overall security posture
- Supported the integration of cloud networking solutions (**AWS**, **Azure**), contributing to the company's hybrid cloud strategy

Embedded Software Engineering Intern | *ABC Communications* *May – Aug 2025*

- Designed and developed reliable software for satellite on-board systems, enhancing data processing capabilities by 30%
- Implemented **Embedded Linux** solutions for both space and ground systems, improving system stability and performance
- Developed firmware and drivers for **IoT modules**, increasing data transmission efficiency by 25%
- Utilized **C/C++** for embedded systems programming, focusing on interrupt handlers, concurrency, and hardware interfaces (**SPI**, **I2C**, **CAN**)

Sales Associate | *BuyBest Canadian Tech Retailer, Burlington ON* *May – Aug 2024*

- Developed strong product knowledge across consumer electronics, including computers, networking devices, and smart home technology, building a foundation for technical fluency
- Communicated complex technical information in a clear, accessible manner, honing communication skills in technical explanations
- Collaborated with cross-functional teams to meet sales goals, demonstrating teamwork, problem-solving, and adaptability in a fast-paced retail environment

Projects

Personal Website Hosted on Raspberry PI | *Personal Project* *Sept 2024 – Feb 2025*

- Developed and deployed a personal portfolio website using a **Raspberry Pi** 4 with 2GB RAM
- Installed and configured **Nginx** web server to host website, ensuring efficient and reliable performance
- Designed and implemented the website using **HTML**, **CSS**, and **JavaScript**
- Achieved 99.9% uptime by setting up basic security measures, including UFW firewall and regular system updates
- Handled over 1,000 unique visitors in the first month, demonstrating project scalability and effectiveness

Extracurricular Activities

Controls Team Member | *McMaster University Aerospace Team* *Sept 2024 - Present*

- Developed control algorithms for autonomous flight using **C++** and **Python**, improving stability by 20%
- Integrated hardware and software for avionics systems, utilizing **Arduino** and **Raspberry Pi**, reducing integration time by 30%
- Collaborated with cross-functional teams to integrate software systems into aircraft, demonstrating communication and teamwork skills

Skills

Software Skills:

- C/C++
- Python
- Bash
- Java
- JavaScript/HTML/CSS
- Verilog/VHDL
- AWS
- Azure
- Git/GitHub
- MATLAB/Simulink
- LabVIEW
- Wireshark
- Nagios
- AutoCAD/Autodesk Inventor
- Linux/Unix

Other Skills:

- FPGA Design
- ARM Microcontrollers
- Raspberry PI & Arduino
- Soldering
- PSpice
- I2C, SPI, CAN, UART protocols
- G-Suite and MS Office Applications