

SPENCER COCKBURN

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SKILLS

Languages: C, C++, Go, JavaScript/TypeScript, PowerShell, Java, Python

Software: Docker, Git, GitHub Actions, SQL, MongoDB, Google OAuth, Linux

Frameworks: React.js, Next.js, Vue.js, Express.js, Node.js, io_uring

PROFESSIONAL EXPERIENCE

Systems Engineer, Co-op

Jan. 2026 - Present

Motorola Solutions Inc.

Vancouver, BC

- Restored build pipeline during 2 outages by debugging PowerShell scripts and Dockerfiles, recovering 4+ weeks blocked development time for 8 developers
- Prototyped Windows image CI/CD pipeline using GitHub Actions to evaluate viability
- Built Python internal synchronization tool for inventory management, reducing data entry time by 50% and eliminating inconsistencies
- Engineered Go stress-testing tool shared with partner corporation, running 600+ iterations to capture rare failure (5 occurrences) and isolate root cause
- Authored 14 team and customer guides, accelerating issue resolution and troubleshooting

PROJECTS

Asynchronous HTTP Server | C++, Linux, TCP

Mar. 2026 - Present

- Implemented C++ server using Linux's io_uring and stackless coroutines to achieve 180k+ requests/sec across 256 concurrent connections
- Designed parallel operation by creating an asynchronous task handler per logical processor to maximize I/O throughput
- Integrated libhttp library for HTTP/1.1 compliant parsing, avoiding latency and slowdowns

Auto Publish | Next.js, MongoDB, Netlify, Google OAuth

Sept. 2025 - Nov. 2025

- Implemented a new user-generated content moderation and publishing work flow with a multidisciplinary team, achieving a 3x speed up
- Built a production web environment using Netlify, MongoDB, and Google OAuth, ensuring seamless web deployments, persistent data storage, and secure authentication via NextAuth
- Created backend for publishing and updating content management system (CMS) content, integrating with Hayden's Hub's existing content models
- Helped develop React-based web portal and admin dashboard, maintaining an organized codebase whilst meeting design specifications

Music Guessing Web Game | Express, SQL, Vue, Netlify

Aug. 2025 - Oct. 2025

- Built an interactive music guessing game with a Vue.js frontend for engaging experience
- Developed a RESTful API using Express.js and Netlify functions to serve song and clue data from in-cloud SQL database, and automated daily clue generation

EDUCATION

University of British Columbia

Expected April 2028

Bachelor of Science (BSc), Computer Science

GPA: 3.9