

# Sam McClenaghan

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## EDUCATION

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### University of Victoria

*Bachelor of Science in Computer Science*

Victoria, BC

*Sept 2023 - April 2027*

### Bellerose Composite High School

*International Baccalaureate Diploma Programme*

Edmonton, AB

*Aug. 2020 - June 2023*

## EXPERIENCE

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### Full Stack Developer, Intern

*Leanpub*

May 2025 - Dec. 2025

*Victoria, BC*

- Built and maintained scalable book-publishing features in Ruby on Rails 8 with RESTful APIs and Active Storage, increasing pipeline reliability and team efficiency.
- Optimized Markua editor for large-scale manuscripts with enhanced media support and faster text rendering.
- Rebuilt Dropbox API integration to streamline file sync and publishing flows for authors using AWS S3 and background job queues.
- Implemented end-to-end background job progress tracking (ActiveJob::Status + Redis pub/sub + SSE) and a Remix/React progress bar with reliable completion/failure handling for author-facing publishing workflows.

### Software Developer, Intern

*Trustscience*

Nov. 2022 - Aug. 2024 (Summers)

*Edmonton, AB*

- Developed and deployed a production-grade file version-control system using HTTP2 and JSON Patch to enable delta storage, reducing AWS S3 costs by 15%.
- Modernized front-end architecture with Vue 3 Composition API and serverless AWS Lambda services, accelerating partner onboarding by 45%.
- Engineered and delivered a microservice-based real-time financial analytics platform using DynamoDB and Elasticsearch, achieving faster query performance.

## PROJECTS

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### Course Scheduler | *Go, React, TypeScript, SQLite*

2025

- Built a full-stack course scheduling platform with Go/Chi REST API and React 19 frontend, featuring interactive weekly calendar with drag-and-drop, real-time enrollment data, and shareable schedules.
- Developed concurrent web scraper using goroutines to fetch course data from UVic's catalog and Banner systems, parsing HTML with custom tree-walking algorithms to extract section details and enrollment stats.
- Deployed containerized application on Fly.io with Caddy reverse proxy; implemented type-safe database layer using sqlc with SQLite for course storage and schedule persistence.

### Text Adventure | *Java, Design Patterns, OOP*

Oct 2023

- Architected event-driven game engine in Java with Factory and Command patterns, enabling modular command system with 8 player actions across 9 interconnected rooms.
- Implemented custom event system using functional interfaces to decouple command execution from state management, reducing coupling and enabling extensible features.
- Designed polymorphic domain model with abstract base classes for combat, inventory management, and graph-based navigation using HashMap data structures.

## TECHNICAL SKILLS

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**Languages:** React.js, Vue.js, Python, Go, Java, SQL, Ruby

**Frameworks & Libraries:** Ruby on Rails, Next.js, Remix, TailwindCSS, Bootstrap

**Developer Tools:** Git, Docker, Jira, AWS (Lambda, S3, DynamoDB)