

Mfon Udoh

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EDUCATION

Thompson Rivers University

Bachelor of Computing Science, Computer Science (**GPA: 3.5/4.0**)

Kamloops, BC

December 2026

- **Relevant Coursework:** Data Structures and Algorithms, Operating Systems, Database Systems, Software Architecture and Design, Computer Networks, Applied Artificial Intelligence, Discrete Mathematics.

EXPERIENCE

Software Developer Co-op

Environment and Climate Change Canada

May 2025 – December 2025

Kelowna, BC

- Developed a ticketing system using ServiceNow to streamline service requests from clients, serving **10,000+** users.
- Wrote scripts using JavaScript to enforce UI policies on forms, reducing user manual input errors.
- Built a KPI dashboard for an internal group, integrating **10** performance indicators to support decision making.
- Re-engineered **3,000+** lines of legacy Python code into ServiceNow flows, centralizing Service Desk operations.
- Fine-tuned an NLP model for a virtual agent by utilizing curated data, achieving **95%** intent resolution accuracy.

PROJECTS

Mentra | *Electron.js, Flask, Python, PostgreSQL, Groq*

[Link](#)

- Built an AI-powered learning overlay at **CalHacks 12.0** that provides interactive tutorials without context-switching.
- Developed an automation agent using Python to capture screenshots, advance lessons, and push UI updates via WebSocket with sub-second response times.
- Designed an LLM-based lesson generation pipeline that converts natural language requests into instructions.

Key-Value Database with Raft Consensus | *Go, gRPC, Raft*

[Link](#)

- Built a distributed key-value store with an append-only log, an in-memory hash index, and gRPC API for Get/Put operations.
- Implemented Raft consensus algorithm (leader election, log replication) achieving strong consistency across a local 3-node Docker cluster with **p99** write latency under **10ms** in benchmarks.
- Optimized log compaction with hint-file indexing, reducing **5GB** dataset restart time from **12s** to under **2s** and decreasing disk usage by **40–50%** in testing.

ScribeLoop | *Java, Spring Boot, Next.js, PostgreSQL, WebSockets, Yjs*

[Link](#)

- Built a collaborative study notes platform where students organize and edit shared documents in real-time with live cursor presence.
- Engineered conflict-free editing with Hocuspocus/Yjs achieving **p50: 3ms**, **p95: 14ms** edit propagation latency over **200+ samples** across concurrent clients.
- Designed PostgreSQL persistence for Yjs updates enabling safe syncing and zero data loss across sessions.

Eureka | *Next.js, TypeScript, Python, PostgreSQL*

[Link](#)

- Developed a web platform aggregating hackathon projects from Devpost to help developers discover inspiration.
- Created an ETL pipeline that scrapes and enriches project data daily using Gemini API for categorization.

TECHNICAL SKILLS

Languages: Java, Python, C, C++, Go, JavaScript/TypeScript, HTML/CSS

Databases: PostgreSQL, MySQL, Oracle, SQLite, MongoDB

Frameworks and tools: Spring Boot, Next.js, React.js, FastAPI, Docker, AWS, Git

Concepts: Software Engineering, Backend Engineering, Distributed Systems, Cloud Platforms, Agile Methodologies