

Mfon Udoh

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EDUCATION

Thompson Rivers University

Kamloops, BC

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

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

May 2025 – December 2025

Environment and Climate Change Canada

Kelowna, BC

- Developed a ticketing system using ServiceNow to streamline service requests from clients, serving **10,000+** users.
- 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.
- Contributed to Agile development through sprint cycles and iterative delivery to incrementally ship features.

PROJECTS

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

[Link](#)

- Built a distributed key-value store with an in-memory hash index and a gRPC API for Get/Put operations.
- Implemented the Raft consensus algorithm (leader election, log replication) achieving strong consistency across a local 3-node cluster with **p99** write latency under **10ms**.

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

[Link](#)

- Built an AI-powered overlay at **CalHacks 12.0** that provides interactive tutorials for learning software.
- Developed an agent using Python to capture screenshots, advance tutorials, and push UI updates via WebSocket with sub-second latency.

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

[Link](#)

- Built a collaborative study platform to organize and edit shared documents in real-time with live cursor presence.
- Designed the RESTful API using Spring Boot and implemented unit testing with JUnit to ensure reliability.
- Engineered conflict-free editing with Hocuspocus/Yjs achieving **p50: 3ms**, **p95: 14ms** edit propagation latency over **200+ samples** across concurrent clients.

Repro | *Next.js, TypeScript, Neon Postgres, Gemini, Upstash QStash, Vercel Sandbox*

[Link](#)

- Built a LeetCode-style platform to upload research papers and implement the core algorithms in a browser IDE.
- Designed an async job pipeline with Postgres state, Vercel Blob storage, and QStash workers to handle PDF upload and code generation.
- Used Gemini to generate LeetCode-style code scaffolds and tests from PDFs with structured JSON output and schema validation.

TECHNICAL SKILLS

Languages: Java, Python, C, C++, Go, JavaScript, TypeScript, SQL

Databases: PostgreSQL, MySQL, Oracle, SQLite, MongoDB

Frameworks and tools: Spring Boot, Next.js, React.js, Node.js, FastAPI, Docker, AWS, Git, GitHub Actions, Linux

Concepts: Object-Oriented Programming (OOP), Backend Engineering, Distributed Systems, Cloud Platforms, Agile Methodologies