Mfon Udoh

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EDUCATION

Thompson Rivers University   Kamloops, BC
*Bachelor of Science in Computer Science (**GPA: 3.5/4.0**)*   *May 2027*
- **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.
- Wrote scripts using JavaScript to enforce UI policies on forms, reducing manual input errors by **40%**.
- 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 quality data, achieving a **95%** intent resolution accuracy.

PROJECTS

Mentra | *Electron.js, Flask, Python, PostgreSQL, Groq*   GitHub
- Built an AI-powered learning overlay at **CalHacks 12.0** that teaches software skills by watching your screen and guiding you step-by-step without switching windows.
- Programmed an AI agent that analyzes periodic screenshots to detect task completion and automatically advance lessons, pushing real-time instructions via WebSocket with <**100ms** latency.
- Implemented an LLM-powered lesson generation pipeline that converts natural language queries into structured 15-step tutorials in <**5 seconds**.

FilmFindr | *Next.js, Java, Spring Boot, PostgreSQL, TMDB API*   GitHub
- Developed a movie recommendation platform that surfaces personalized content from **500,000+** TMDB titles through cosine similarity analysis of user preferences and movie attributes.
- Built a Spring Boot API service, reducing **p95** query latency by **30%** through caching and database indexing.

MapReduce | *Go, gRPC*   GitHub
- Built a distributed MapReduce engine in Go with leader-follower architecture and gRPC communication for parallel job execution across multiple worker nodes.
- Implemented fault tolerance via heartbeat monitoring and automatic task reassignment, maintaining job completion on up to **30%** worker node failures.
- Achieved **12x** speedup on **10GB** datasets through load-balancing of map/reduce tasks across available cores.

Eureka | *Java, Spring Boot, Python, Docker, AWS, Gemini API*   GitHub
- Built a platform aggregating **10,000+** hackathon projects to help developers discover their next project idea.
- Engineered an automated ETL pipeline scraping **100+** Devpost projects daily, leveraging the Gemini API for intelligent categorization and data enrichment, and PostgreSQL for storage.
- Implemented unit and integration tests for API and ETL components, ensuring **99%** uptime and data integrity across **100+** daily project ingestions.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, Go, JavaScript/TypeScript, HTML/CSS
Databases: PostgreSQL, MySQL, Oracle, SQLite, MongoDB
Frameworks and tools: Spring Boot, Docker, AWS, Next.js, React.js, FastAPI, Git
Concepts: Full-Stack Development, Distributed Systems, Cloud Platforms, Database Design, DevOps