

# Mfon Udoh

(236) 597-8934 | [mfonezekel@gmail.com](mailto:mfonezekel@gmail.com) | [linkedin.com/in/mfonudoh18](https://www.linkedin.com/in/mfonudoh18) | [github.com/Mfon-19](https://github.com/Mfon-19)

## EDUCATION

### Thompson Rivers University

*Bachelor of Computing Science*

Kamloops, BC

*Expected May 2026*

- **Relevant Coursework:** Data Structures and Algorithms, Advanced Web Design and Programming, Database Systems, Software Architecture and Design, Computer Networks, Applied Artificial Intelligence.
- **Achievements:** Deans List recipient for 4 semesters.

## EXPERIENCE

### Application Developer Co-op

May 2025 – Present

*Environment and Climate Change Canada, Kelowna, BC*

- Developed and deployed **5** forms on ServiceNow, streamlining communication between **100+** clients and Service Desk.
- Wrote scripts using JavaScript to enforce UI policies, reducing manual input errors by **40%**.
- Engineered a KPI dashboard for the Geospatial Support group, integrating **10** performance indicators to support data-driven insights.
- Re-engineered **3,000+** lines of legacy Python code across **6** automations into streamlined native ServiceNow flows, centralizing Service Desk operations.

## PROJECTS

### FilmFindr | *Next.js, Spring Boot, TypeScript, PostgreSQL, TMDB API*

- Architected and developed a full-stack web application with a Spring Boot backend and a Next.js frontend.
- Engineered a secure end-to-end authentication system using Spring Security and NextAuth.js with JWT-based authorization.
- Enhanced performance through caching, reducing data load times by **40%** and improving overall app responsiveness.

### Network Intrusion Detection System (NIDS) | *Python, FastAPI, Docker*

- Developed a machine learning based NIDS achieving **95%** accuracy on **3 million** network flows, outperforming traditional rule-based systems by **6%**.
- Engineered an automated, reproducible ML pipeline with hyperparameter tuning and one-click reports for model performance and interpretability.
- Deployed the model as a self-training **FastAPI** microservice in **Docker** to serve real-time batch and file-based predictions.

### AI Chatbot | *Next.js, TypeScript, PostgreSQL, Gemini API*

- Developed a real-time chatbot using Next.js and the Google Gemini API, implementing response streaming with the Vercel AI SDK.
- Implemented server-side logic using Next.js API routes to interact with Gemini for tasks like dynamic chat title generation.
- Integrated secure Google OAuth authentication using NextAuth.js, enabling persistent chat history in a Neon Serverless PostgreSQL database.

### FinanceTracker | *PHP, JavaScript, Bootstrap, MySQL*

- Built a full-stack personal finance application using PHP and MySQL, applying the **Model-View-Controller (MVC) architecture**.
- Implemented prepared statements to prevent SQL injection and `password_hash()` for secure user authentication, safeguarding user data.
- Developed a dynamic reporting system, enabling users to generate insightful financial summaries.

## TECHNICAL SKILLS

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

**Databases:** PostgreSQL, MySQL, Oracle, SQLite, MongoDB

**Frameworks/Libraries:** Next.js, React.js, Express.js, Node.js, Spring Boot

**Tools:** Git, Figma, Postman, Docker