

MIRACLE CHRIS-MBA

Machine Learning Engineer | Applied AI | Forward-Deployed Systems
North York, ON, Canada · miraclechrismba@gmail.com · GitHub | LinkedIn

SUMMARY

Applied Machine Learning Engineer with experience building and deploying across computer vision, generative AI, and scalable backend platforms. Comfortable owning ambiguous, customer-facing problems end to end, with a strong focus on accessibility, impact, and production-ready ML.

CORE SKILLS

- **Programming:** Python, Go, PHP, TypeScript, SQL
- **Applied AI:** Computer Vision, Generative AI (RAG, Agents), Multi-Modal Systems
- **ML Infrastructure:** Model deployment, inference pipelines, evaluation metrics, monitoring, optimization
- **Frameworks:** PyTorch, TensorFlow, OpenCLIP, Scikit-learn
- **Cloud & DevOps:** AWS (Bedrock, S3, EC2), Docker, CI/CD, GCP fundamentals
- **Systems:** REST APIs, distributed systems, data pipelines

EXPERIENCE

AI Engineer (Co-op) — Ontario Public Service

Toronto, Canada | Jan 2026 – Present

- Reduced security incident triage time by **35%** by designing and deploying a **Bedrock-powered RAG system** over historical vulnerability and incident data.
- Built and deployed **LLM-based agents** that crawled internal DataLake logs, generated and updated incident playbooks, and improved automated response time by **15%**.
- Worked directly with security stakeholders to translate **ambiguous operational requirements** into production AI systems, owning solutions end-to-end.

Backend Engineer — SHIIP

Remote (US) | Jan 2022 – Jan 2025

- Improved logistics platform performance by **40%** by redesigning rate and pricing services and optimizing data storage and retrieval paths.
- Integrated multiple third-party logistics APIs, increasing workflow reliability by **20%** while handling partner-specific edge cases and failures.

- Enhanced system resilience by implementing graceful degradation strategies, reducing geocoding-related errors by **15%**.
- Collaborated cross-functionally with product and operations teams to deliver customer-facing features under shifting requirements.

Co-Founder & Backend Lead — Copnow

Hybrid | Aug 2021 – May 2024

- Co-founded an e-commerce marketplace focused on trust, delivery accuracy, and speed; acted as **technical owner** of backend systems.
- Led a cross-functional team of **3–5 engineers**, coordinating product, infrastructure, and analytics workstreams.
- Integrated predictive analytics for order tracking, improving service uptime by **30%** and reducing fulfillment errors.

SELECTED PROJECTS

ONA — Object Navigation Assistant (Assistive AI)

- Built an **accessibility-first, real-time spatial awareness system** for visually impaired users with a safety-first design mandate.
- Integrated **YOLOv8 (obstacle detection)**, **MiDaS (depth estimation)**, **RetinaFace + FriendNet (face detection/recognition)**, and OCR into a multi-modal perception pipeline.
- Designed priority-based hazard detection, depth-aware distance categorization, and cooldown logic to ensure low-latency (<500ms) guidance.
- Focused on real-world deployment constraints, benchmarking **custom-trained models vs transfer learning** across accuracy, latency, and efficiency.

FriendNet — Multi-Model Image Classification Platform

- Built a FastAPI-based inference system serving multiple models (Custom CNN, ResNet, EfficientNet, CLIP).
- Fine-tuned OpenCLIP (ViT-B/32), initially training classification heads and later unfreezing full models for improved accuracy.
- Implemented evaluation pipelines including confusion matrices and robustness testing to guide model iteration.

EDUCATION

Artificial Intelligence (Co-op Program) — Fanshawe College

London, ON | Jan 2025 – Present

GPA: 4.2 / 4.2

- Computer Vision (CNNs, ResNet, CLIP), Generative AI, ML deployment

BSc Computer Science — Madonna University
Nigeria | Oct 2016 – Dec 2020

- Thesis: Sensor-guided autonomous vehicle using Arduino and ultrasonic sensors

ADDITIONAL

- Experience building **cloud-agnostic ML pipelines** transferable across AWS and GCP (Vertex AI equivalents).
- Comfortable operating in fast-moving, customer-facing environments with shifting priorities.
- Strong interest in applied, real-world AI systems with measurable impact.