

MOHAMED AZAB

Ottawa, Ontario, Canada

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EDUCATION

Carleton University School of Computer Science

Cumulative GPA: 10.80 / 12.00

Bachelor of Computer Science, AI & Machine Learning, Cyber Security | Minor in Business

Expected 2028

- **Relevant Coursework:** Data Structures, Algorithms, Systems Programming, OOP, Probability Models

EXPERIENCE

Junior DevOps Specialist

May 2026 – Aug 2026

CIRA (Canadian Internet Registration Authority) – Co-op

Ottawa, Ontario

- Supporting **cloud and on-prem infrastructure** for CIRA's cybersecurity and DNS services at national scale.
- Developing **CI/CD pipelines** and automation workflows using **GitLab CI/CD**, Terraform, Ansible, and **AWS**.
- Improving system reliability through **monitoring, alerting**, and runbooks across distributed systems.
- Maintaining **infrastructure-as-code** practices and configurations across cloud and on-prem environments.

Founder & Full-Stack Developer

October 2023 – Present

AmanahTech – Self-Employed

Ottawa, Ontario

- Built and deployed **production web apps** for clients including Salam Society, Milk Inc., HTclean, BluesCrews, Empower Orphans, RamiTheBarber and more.
- Developed booking systems, **authentication**, **RBAC** dashboards, and integrated APIs for payments, email, and analytics.
- Deployed and managed **client VPS environments** with **Docker**, **NGINX**, **SSL/TLS**, domains, firewalls, and backups.
- Implemented **CI/CD pipelines** with **GitHub Actions** to automate builds and deployments across client projects.

PROJECTS

KnowledgeMesh | Python, Next.js, FastAPI, PostgreSQL, pgvector, Redis, Docker, Ollama, LLM APIs

March 2026

- Architected **multi-service RAG platform** where every answer is **citation-backed**, tied to real document passages.
- Built **Redis** worker for extract, chunk, embed with **pgvector**, **MMR reranking**, and **LLM** routing (OpenAI/Ollama).
- Developed **Next.js** dashboard for documents, **SSE** streaming, diagnostics, rate limiting, and **JWT**-secured APIs.

SentinelStack | Python, Next.js, FastAPI, scikit-learn, PostgreSQL, Docker

March 2026

- Built an **AI SOC platform** that detects live threats, fuses risk signals, and triggers automated response.
- Engineered feature extraction across **8 behavioral signals** per source, feeding **Isolation Forest** detection.
- Implemented **score fusion (LOW→CRITICAL)** with automated alerting, IP blocking, and **LLM**-assisted triage.

PathToOffer | TypeScript, Python, Next.js, FastAPI, SQLite, ReportLab

January 2026

- Implemented **NLP pipelines** to score resumes against job postings and surface targeted **ATS** skill gaps.
- Built **GPT** prompt pipelines to generate tailored resumes, cover letters, and interview questions per posting.
- Designed **REST API** with 10+ endpoints supporting scoring, learning roadmap generation, and **ATS**-ready **PDF** export.

Cadence (Desktop) | TypeScript, Rust, React, Tauri, SQLite, Tesseract.js

September 2025

- Built a **cross-platform AI desktop** planner using **Tauri** with a **Rust** backend and **local-first SQLite** architecture.
- Engineered **AI syllabus extraction** via **Tesseract.js OCR** with **LLM**-assisted task parsing and effort estimation.
- Integrated **AI**-driven suggestions to surface academic gaps and recommend focus areas based on grade trends.

Self-Hosted Home Lab | Ubuntu, Linux, Docker, NGINX, UFW, Tailscale, Python, Bash

November 2024

- Engineered a self-hosted **Linux** server running containerized services behind **NGINX** reverse proxy with **SSL/TLS**.
- Hardened exposure with **UFW** firewall rules, **SSH** key-only auth, and **Tailscale** VPN for zero-trust remote access.
- Automated provisioning, backups, and service health monitoring with **Python** and **Bash** across the full stack.

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, TypeScript, C, C++, SQL, Bash, Rust

Developer Tools: Git, GitHub Actions, GitLab CI/CD, Docker, Linux, Terraform, Ansible, AWS, NGINX, UFW, Tailscale

Frameworks & Libraries: Next.js, React, Node.js, FastAPI, Tailwind CSS, scikit-learn, Tauri (Rust)

Databases & Storage: PostgreSQL, SQLite, Supabase, pgvector, Redis

AI & ML: LLM APIs, Ollama, scikit-learn