

ADAM ABDALLA

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EDUCATION

University of Toronto

Bachelor's, Computer Engineering, Minor in Engineering Business and AI

Sept. 2024 - May 2028

Toronto, ON

- **GPA:** 3.8 | President's Scholar Recipient (\$20 000 merit-based).
- **Coursework:** Calculus, Computer Fundamentals, Linear Algebra, Data Structures and Algorithms, Computer Architecture.

EXPERIENCE

Software Engineering Intern

May 2025 – Sept. 2025

Data Passports

Toronto, ON

- Launched LLAMA-based Python Privacy Advisor Agent using LangChain, sustaining 150+ req/s for over 10,000 users.
- Containerized and deployed Privacy Advisor Agent on Azure VM with Docker and CI/CD, using blue-green releases and health checks to keep sub-second p95 latency and enable zero-downtime rollouts.
- Implemented RAG pipeline to automate GDPR and CCPA compliance DSAR (Data Subject Access Request) generation through Privacy Advisor Agent, cutting average request time from 30 mins to 4 secs and raising submission volume 8-fold.
- Implemented data-protection guardrails with PII redaction, least-privilege Role Based Access Control, and Azure Monitor alerts, maintaining 100 percent compliance and 0 security incidents through 10,000 production runs.

Software Engineering Intern

Apr. 2025 – Sept. 2025

FI Solutions

Toronto, ON

- Owned a customer-facing Data Maturity Assessment platform (Next.js + SQL) that cut audit turnaround from days to sub-10 minutes for 30+ enterprise clients, resulting in 35% higher weekly active users.
- Designed & shipped an ACID-compliant REST API handling 500 survey transactions/sec with 0 data-loss incidents.

Software Engineering Intern

Sept. 2024 – May 2025

University of Toronto Robotics Association

Toronto, ON

- Developed decision-making code in Python, enabling attacking and defending behaviors in autonomous soccer-playing robots.
- Containerized ROS-based localization systems using Docker, cutting team-wide deployment and debugging times by 40%.
- Fine-tuned YOLOv5 Computer Vision Model in Pytorch, using custom datasets via CUDA to accurately identify objects, achieving a 20% mAP boost compared to initial models.

PROJECTS

Self-Hosted Local LLM Dev Platform | FastAPI, Transformers, Qdrant, Docker

- Re-engineered OpenAI's chat API for offline use on consumer hardware (Ryzen 7 2700 / GTX 1660), streaming 25 tokens/s from quantized 7B Llama model and eliminating all external-API costs.
- Developed a JSON-Schema based function-calling engine that validates LLM outputs, executes Python tools, and loops results back to the model, achieving 100% successful calls in 1,000+ automated tests.
- Enabled RAG (retrieval-augmented generation) by integrating an embeddings endpoint (Jina AI base) + Qdrant vector search, delivering a 92% factual accuracy on a 500-question custom KB benchmark.

Gen-AI Website Cloner | Next.js / TypeScript, FastAPI, Vercel + Render

- Engineered a GenAI pipeline that recreates any public website in <15s, streaming DOM/CSS to a 200 K-token LLM and eliminating 95% of manual front-end rebuild effort.
- Built a dual-mode scraper (HTTP + stealth Playwright) that bypasses CAPTCHAs and JS obfuscation, achieving 98% successful captures across 50 test sites.
- Implemented a modular LLM orchestration layer with Claude 4 Sonnet, enabling prompt chaining to extract clean semantic structure from noisy DOMs and generalize layouts across diverse website architectures.
- Architected a lightweight deployment pipeline with a serverless frontend on Vercel and containerized backend on Render, cutting cold-start latency by 35% and reducing deployment overhead to under 1 minute.

Semantic Similarity Engine | Python, Semantic Descriptors, Cosine Similarity

- Engineered an NLP pipeline to tokenize and normalize 1M+ words from classic literature, generating 300K+ semantic descriptors, and leveraging cosine similarity to classify synonym pairs with 72% accuracy on TOEFL-style benchmarks.

CERTIFICATIONS & SKILLS

Languages: C++, C, Python, C#, JavaScript/TypeScript, Java, SQL

Tools & Skills: Linux/Unix, CUDA, AWS, Azure, TensorFlow, PyTorch, FastAPI, scikit-learn, Docker, DevOps, Git, Qdrant, CI/CD

Certifications: Microsoft Certified: Azure Fundamentals (AZ-900)