

AHMED ABDULJADER

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🌐 [Portfolio Website](#)

Education

York University

Bachelor of Science in Computer Science

Sep. 2023 – Apr. 2027

Toronto, ON

Relevant Coursework

- Computer Organization
- Software Design
- Front-End Development
- Advanced OOP
- Python Programming
- Java Programming
- C# Programming
- Discrete Math

Technical Skills

Languages: Python, Java, C#, JavaScript, Typescript, HTML/CSS, Tailwind

Databases: PostgreSQL, NeonDB, MongoDB, Drizzle ORM

Libraries: Next.js, React, Langchain, Ollama

Specialization: Generative AI, Large Language Models, Self Hosted LLMs, Agentic Tools, RAG Pipelines

Experience

Aether Research Club

Co-President & Technical Director University of Ottawa

Present

REMOTE

- Lead and oversee Aether's technical strategy, overseeing backend infrastructure and platform development.
- Built and manage Aether's web platform, offloading AI and backend tasks to a self-hosted Linux server reducing serverless compute resources
- Architected and responsible for the club's backend infrastructure, including an emailing service and member authentication system.
- Built projects like engineering a Linux Ubuntu Server and Integrated a self-hosted LLM for a high school tech department, enabling on-premises AI capabilities for educational use, while adhering to School District Data Privacy Policies.
- Developed a self-hosted research platform, allowing members to deploy LLM models, software projects, and internal tools.

Projects

AI-RAG Agentic Tutor | [GitHub](#) | *Next.js, FastAPI, Python, Ollama, LangChain, Chroma, SerpAPI*

- Developed a self-hosted Rag-Based Agentic Tutor using Ollama, LangChain, and Chroma to generate personalized learning paths based on public curriculum PDFs and quiz data.
- Offloaded LLM inference to Client Devices, **reducing token calls** with LangChain library by **40%**, and **ELIMINATING** compute cost leveraging end-user device by **100%**, and streamlining the pipeline compared to cloud-hosted methods.
- Benchmarked **20s** average inference time on LOW MODEL CPU-only consumer hardware.
- Enabled Agentic search allowing students to receive curated learning resources from VERIFIED platforms like Khan Academy with SerpAPI.
- Enabled multi-language support, environmental transparency, and equity-driven design to support global learners with low-cost, localized AI tutoring.

AI-RAG Agent Portfolio | [Site](#) | *Next.js, TypeScript, OpenAI, Vercel AI SDK, PostgreSQL, pgvector, Drizzle ORM*

- Built a fully serverless AI portfolio website that lets users chat with an AI version of myself trained on my resume and personal documents using a Retrieval-Augmented Generation (RAG) pipeline.
- Engineered a scalable vector search backend using OpenAI embeddings + pgvector (NeonDB) with Drizzle ORM for precise, context-aware responses from resume and project data.
- Leveraged Vercel AI SDK to stream GPT-4o responses in real-time, ensuring snappy UX and zero hallucinations through strict embedded-context grounding.
- Implemented session-aware context injection by retrieving and trimming relevant document chunks based on the latest user query, enabling RAG Agent to respond as "Ahmed" using only grounded, personalized data.

Awards

Provost Scholarship Awarded by York University: \$500

B.E.S.T Startup Project Awarded by York University: \$600

Experience Venture Award Awarded by York University: \$325

Best Security App Awarded 1Password Company