

AHMAD EL-FAKHARANY

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Education

University of Michigan

B.S. in Cognitive Science (Computation Track), Computer Science (minor)

Ann Arbor, MI

Expected April 2027

Selected Courses: Data Structures and Algorithms, Database Systems, Machine Learning for NLP, Stats and Data Science

Student Organizations: V1 Entrepreneurship, Michigan AI Safety Initiative, Michigan Hackers

Entrepreneurial Experience

Snapstack

Founder

- Designed, built, and launched Snapstack, a full-stack AI content app (React/TypeScript PWA, Supabase/Postgres backend, Cloudflare deployment) that turns a user's RSS, YouTube, Reddit, X, and newsletter sources into a daily, time-budgeted reading stack; leveraged AI coding agents (OpenCode) as primary development tools to architect and ship automated ingestion pipelines across 5 source types, a user-intentionality-driven ranking algorithm, offline-first caching, and Stripe freemium billing.
- Built the product's AI layer end-to-end: prompt-engineered OpenAI pipelines that generate objective daily news digests, on-demand article summaries, and TTS audio readings, orchestrated through serverless queues and cron jobs with one-shot generation and failure recovery; iterated the product by collecting and acting on feedback directly from 5+ private beta testers, shipping improvements to onboarding, content ranking, and the user interface.

Work Experience

WebstaurantStore

Software Engineering Intern

Lititz, PA (Remote)

Jan 2026 – Mar 2026

- Cut resource overhead and improved codebase maintainability by refactoring legacy C# in ASP.NET Core REST APIs, replacing MediatR with streamlined endpoint request handling, validated through unit testing and peer code review.
- Drove a tech-debt ticket from pull request to production using Azure DevOps, Git, and ASP.NET Core, shipping across TEST and PROD while sharpening Agile, C#, clean-code, and REST API design skills.

Projects

Custom Coding Agent Harness | Python

- Engineered a Python coding agent from scratch using the OpenAI Agents SDK, implementing a tool-use feedback loop, custom function dispatch, and system prompt orchestration against the OpenRouter API.
- Validated the full agentic reasoning cycle end-to-end with a sandboxed working directory and a suite of unit tests covering file I/O, code execution, and write operations.

Homelab | Linux, Docker

- Architected and deployed a full self-hosted server network on repurposed hardware, standardizing the stack with Linux, containerization (Docker/Docker Compose), and reliable storage layout so services could run consistently.
- Built a resilient, automated backup-and-remote-access setup using Tailscale plus nightly rsync-over-SSH, securing access by keeping services off direct public exposure and controlling entry points.

Autodidact | TypeScript, PostgreSQL, React

- Spearheaded the end-to-end development of an AI-driven learning platform, coordinating architecture decisions and integrating Fetch.ai's ASI:One LLM API to deliver personalized, modular educational roadmaps.
- Collaborated with teammates in architecting and implementing seamless Supabase integration for dynamic storage and retrieval of learning modules and quizzes, ensuring robust data management and scalability.

Leadership, Volunteering, Community

MAC Library

Lead Librarian

Canton, MI

Aug 2025 – Present

- Led a team of 15+ volunteers from planning through execution to organize and catalog 2100+ books across a multilingual community library; building the systems, schedule, and processes that keep the team aligned and the project on track, in order to make the space sufficiently reliable and efficient to support patrons' and visitors' daily needs.

Technical Skills

Languages: Python, SQL, TypeScript/JavaScript, Bash/Zsh, C, C++, C#, HTML/CSS

Tools/Technologies: Git, Docker, Node.js, REST APIs, Linux/Unix, .NET, CI/CD