

Ahmed Hassan Alshaer

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EDUCATION

Indiana University

Bloomington, Indiana

Bachelor of Science in Computer Science

May 2028

Minors: Mathematics and Data Science (in progress) | GPA: 4.0/4.0 | Dean's List: Fall 2025, Spring 2026

- Relevant Coursework: Data Structures, Algorithm Design and Analysis, Linear Algebra, Discrete Math in CS, Statistical Inference

EXPERIENCE

LimeLabels

Remote

Founding Engineer Intern

Jan 2026 – Aug 2026

- Built a multi-tenant retail middleware backend in FastAPI/Python and React/TypeScript, syncing catalog and pricing data between five POS systems (Shopify, Square, NCR Voyix, Korona, Clover) and Hipoint shelf-label hardware
- Designed the Supabase/PostgreSQL data layer (schema, tables, tenant-scoped queries) and optimized 40+ production indexes, cutting slow product-search queries with targeted GIN trigram indexes
- Set up WorkOS authentication and authorization enforcing tenant isolation on every API route, maintained GitHub Actions CI running lint and pytest on every push, and configured database replication on Railway
- Used Temporal Cloud for durable, horizontally scalable orchestration of long-running sync jobs, and fixed a production payload-size bug that was crashing large-catalog pricing dispatch

BuildWithin

Washington, D.C.

Machine Learning Intern

May 2025 – Aug 2025

- Designed and deployed candidate–job matching pipelines with LangSmith and LLM embeddings, cutting manual review time 30%
- Served as human in the loop on agent outputs, tracing incorrect matches to prompt and retrieval failures and feeding fixes back
- Cleaned and structured 2,000+ candidate records across Google Sheets and databases feeding the matching pipeline

Indiana University

Bloomington, Indiana

Undergraduate Instructor and Teaching Assistant, Mathematics

Jan 2025 – Present

- Led weekly Discrete Math discussion sections for 40 students in logic, set theory, combinatorics, and graph theory, grading 100+ assignments and exams per month
- Supported instruction for 90+ students in MATH-B110, tutoring across 5+ math courses and holding weekly office hours

PROJECTS

Coco: AI school-calendar assistant for parents | trycoco.ai

Jun 2026 – Present

TypeScript, Anthropic SDK, Next.js, PostgreSQL/Drizzle, BullMQ, Redis, Docker

- Built and maintain the production LLM agent that answers parents' scheduling questions, with four tools that read and write their children's calendar events under ownership-scoped queries
- Wrote a 19-case test suite that runs sample parent questions through the agent and checks it picks the right tool, child, and date range, and required it to pass before any prompt or tool change ships
- Built the camps data pipeline: schema, loader, a monitoring worker across 24 registration sources, and a weekly refresh that proposes updates for human review instead of writing directly
- Shipped the internal admin dashboard: account management, source health monitoring, and an append-only Postgres audit log

LEADERSHIP & AWARDS

Treasurer and Philanthropy Chair, Middle Eastern Student Association (Aug 2024 – May 2025): \$10,000+ event budgets, 250+ attendees

Awards & Scholarships: U.S. Embassy Microscholarship (English & Leadership), Math Excellence Awards (Regional Contests), Certificate of Academic Excellence (2nd Highest GPA Nationwide), Honored by the President of Palestine

SKILLS

Languages: Python, Java, TypeScript/JavaScript, SQL, Swift | Spoken: Arabic (native), English (fluent)

AI/ML & Data: Anthropic SDK, LLM agents and tool calling, evaluation harness design, LLM embeddings, LangSmith, prompt engineering, human-in-the-loop AI evaluation, NumPy, pandas, scikit-learn

Backend: FastAPI, PostgreSQL, Supabase, Drizzle, Redis, BullMQ, Temporal, REST API design, multi-tenant system architecture, workflow orchestration

Frontend & Infrastructure: React, Next.js, SwiftUI, Xcode, Docker, Git/GitHub, CI/CD (GitHub Actions), Railway