Ahmed Mohamed

Full-Stack Software Engineer · May 2027 Graduate · Chicago, IL (Open to Relocation)
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Experience

Mayo Clinic, *Software Engineer Intern* — Rochester, MN · Sep 2025 – Dec 2025

- Built a browser-based tool that removes patient identifiers from DICOM medical scans locally, so PHI never reaches a server.
- Implemented a **270-tag** HIPAA-compliant de-identification engine with 3 rulesets, UID hashing, and validation.
- Wrote 122 tests (87% coverage) verifying no network request carries PHI, with log redaction.

Calero, *Software Engineer Co-Op* — Rochester, NY / Remote · May 2025 – Dec 2025

- Cut setup for procurement developers from **8h to 15m** by automating entity-to-repository generation in C#/.NET.
- Built an LLM regression harness in xUnit/Semantic Kernel that replays 100+ scenarios deterministically on each deploy.
- Shipped an ASP.NET Core 8 REST API for invoice test data, cutting QA setup from hours to under a minute.
- Introduced Redis caching with timestamp invalidation so the assistant always used the latest invoice state.

AImpulse Learning, *Software Engineer Co-Op* — Remote · Sep 2024 – Feb 2025

- Deployed a React.js/Node.js/Dialogflow chatbot on AWS Lambda, serving **10,000+ queries/month**.
- Reduced resume processing time by 30% via a parsing pipeline with Python, PostgreSQL, and AWS S3.
- Improved mentor-matching accuracy by 20% by optimizing algorithms with Google Maps API and REST.

Yaoota, *Software Engineer Intern* — Remote · May 2024 – Sep 2024

- Created a React.js product comparison tool matching live inventory; cut its API latency 25% with caching and pagination.

Projects

ChessMate – Production Chess Coaching Platform — **Live** | **Case Study**

Python, Django, React.js, AWS, PostgreSQL, Docker, Celery, OpenAI, OpenTelemetry, Grafana, Sentry

- Founded and operate the platform with 180+ users and live Stripe payments; generated 200+ Stockfish-powered coaching reports across 1,000+ games from Chess.com and Lichess.
- Designed an async Celery and Redis pipeline that queues and analyzes batches of 5–30 games and reports live progress.
- Shipped CI/CD and **2,150+ tests**; deployed on AWS Elastic Beanstalk with Docker, OpenTelemetry, and Grafana.
- Extracted the locking layer into **fencekit** (**PyPI**): fencing-token Redis locks that stop duplicate Celery runs.

Open Source – Merged Pull Requests

- **django/django #21629**: fixed a **9-year-old** crash in Django's parallel test runner.
- **redis/redis-py** *(250M+ monthly downloads)* **#4206**, **#4254**: cluster EVALSHA routing and async connection fixes.
- **matplotlib/matplotlib #32147**, **#32380**: mathtext parsing fix backported to 3.11, plus a figure-image fix.
- **open-telemetry/opentelemetry-python-contrib #4827**, **#4828**, **#5063**: Celery/Redis spans, SQLAlchemy metrics.

Education

Luther College — Decorah, IA

B.A. in Computer Science, minors in Mathematics and Data Science | CS & Math TA — *Expected: May 2027*

Technical Skills

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

Frameworks: React, Node.js, Django, Flask, .NET, Semantic Kernel, OpenAI, LLMs, Claude Code, Cursor, PyTest, xUnit.

Databases: PostgreSQL, MySQL, SQL Server, MongoDB, Redis, RabbitMQ.

Cloud & DevOps: AWS, GCP, Azure DevOps, Linux, Docker, Kubernetes, Git, NGINX, OpenTelemetry, Grafana.

Interests: Competitive chess (2150 blitz on Chess.com), swimming. Bilingual: English, Arabic.