

Muhammad Yasser El-Ghazaly

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Final-year CS & Mathematics student with production experience building LLM evaluation pipelines, synthetic test data generation, data quality tooling and Python/TypeScript backends. Available for full-time or part-time remote work.

EDUCATION

The American University in Cairo (AUC)

Cairo, Egypt

B.Sc. Double Major in Computer Science (AI Specialization) and Mathematics; GPA: 3.695

Feb 2023 – Dec 2026

Technische Universität Darmstadt (TU Darmstadt)

Darmstadt, Germany

Exchange Semester; Coursework: Reinforcement Learning, Multimodal AI

Feb 2026 – Aug 2026

SKILLS

Languages: Python, TypeScript, JavaScript, SQL, C++

Backend & Data: FastAPI, Flask, NestJS, Node.js, REST APIs, PostgreSQL, MySQL, MongoDB, pandas

AI & Evaluation: PyTorch, scikit-learn, sentence-transformers, LLM evaluation, synthetic data generation

Engineering Practice: Git, code reviews, GitHub Actions CI/CD, Playwright, Docker, AWS EC2

EXPERIENCE

CND Research

Remote

Research Assistant, Physics-Informed Deep Learning

Aug 2026 – Present

- Build and train physics-informed Fourier Neural Operators in PyTorch for electromagnetic field prediction, tuned via a 30-trial Optuna search on GPU.

Cyber Agora

Jeddah, Saudi Arabia (Part-time Remote)

R&D Software Engineer

Jun 2025 – Jul 2026

- Built the automated evaluation and QA pipeline for an LLM analytics agent: scaled the test suite from 7 to 1,000+ cases with multi-LLM synthetic data generation, validated against a gold/silver ground truth (Metabase-verified and two-model agreement), and compared versions with McNemar's and Wilcoxon tests.
- Developed the agent itself, letting non-technical users of a multi-tenant SaaS platform query live data in plain English through schema discovery, table introspection and safe SQL execution over a 300+ table database.
- Cut customer persona redundancy by 60–80% with a Python pipeline deduplicating profiles via sentence-transformer embeddings and clustering, served through a Flask REST API in under 30 seconds per dataset.
- Built a pharmaceutical recommendation system through three iterations to a 23.2x improvement, from a collaborative filtering baseline to a Two-Tower PyTorch network reaching 25% Hit Rate@10.

Nawy

Cairo, Egypt

Full-Stack Intern

Jul 2024 – Sep 2024

- Built a database auditing system with NestJS and PostgreSQL that records every change to production data, plus a launch-day management platform connecting brokers, buyers and sellers.
- Set up GitHub Actions CI/CD, deployed the backend on AWS EC2, wrote automated end-to-end tests with Playwright, and collaborated through pull requests and code reviews.

AUC Library

Cairo, Egypt

Software Intern

Jun 2025 – Aug 2025

- Worked on a team of 4 building an application that generates promotional video scripts from book metadata, using Ollama local models for generation, Helsinki-NLP for translation and a React frontend.

PROJECTS

HateSpeechAlert | [GitHub](#)

- Full-stack text classification app: a PyTorch model trained with a custom loss for class imbalance, served through a FastAPI backend to a React frontend with real-time confidence scoring.

EquiDash: Fairness-Aware Delivery Dispatch | *Research Paper, AUC*

- Co-authored a paper and built a Python replay simulation over 654K real dispatch records, validating a PCA-weighted fairness scoring system that reduced workload inequality with minimal on-time impact.