

# Anas Abuelhaag

Full-Stack AI Engineer · Cairo, Egypt

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## SUMMARY

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Full-Stack AI Engineer | Machine Learning Engineer | Cloud Engineer. Software engineering student who has shipped intelligent systems across web, mobile, and cloud — from an award-winning Azure OpenAI diet planner to an open-source terminal AI assistant. Microsoft Azure AI Engineer certified (AI-102), Gold Microsoft Student Ambassador, freelance AI engineer, and published researcher in assistive technology and healthcare AI.

## EXPERIENCE

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**Software & Data Engineering Intern** · Orange Business Jul 2025 – Sep 2025

- Built cloud-native data engineering pipelines on Azure, focusing on scalable hybrid deployments.
- Contributed to backend systems integrating Azure services for production-grade data workflows.

**AI Engineer (Freelance)** · Upwork · Remote Jan 2024 – Aug 2024

- Delivered AI and cloud solutions for international clients across 8 months, specialising in intelligent backends, data pipelines, and applied ML on Azure.

**Gold Microsoft Student Ambassador** · Microsoft · Cairo, Egypt Nov 2023 – Present

- Recognised at Gold tier — top level of the global MLSA programme.
- Founded Microsoft Student Club at ECU; organised workshops on AI, Azure, and Quantum Computing.
- Ran ML 101 workshop series and mentored peers across the campus tech community.

**Ambassadors Projects Team Lead** · Microsoft Learn Student Ambassadors · Remote Jun 2025

- Led cross-functional ambassador project teams across the MLSA global community.

**Co-Organiser** · Azure Egypt User Group Jan 2024 – Nov 2024

- Co-organised events and workshops for Egypt's largest Azure community.

**Technical Team Member** · IEEE ECU Student Branch Nov 2022 – Jan 2024

- Contributed to student-led engineering events and technical initiatives at ECU.

## TECHNICAL SKILLS

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**Languages:** Python, TypeScript, JavaScript, Kotlin, SQL, Solidity

**Frontend:** Next.js, Vue 3, React.js, Vite, Tailwind CSS, HTML/CSS

**Backend:** FastAPI, Node.js, Azure Functions, REST APIs

**Mobile:** Expo, React Native (TypeScript)

**AI / ML:** Azure OpenAI, LangChain, Azure AI Services, PyTorch, scikit-learn, NLP, Ollama

**Cloud & DevOps:** Azure (AI-102), Docker, Azure Container Apps, GitHub Actions, CI/CD, Vercel

**Databases:** Neo4j, Firebase, PostgreSQL

**Tools & Hardware:** Postman, Git, Raspberry Pi Pico, Arduino, Azure Speech SDK, Figma

## PROJECTS

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### **Drift CLI — Terminal-Native AI Assistant** GitHub Copilot CLI Challenge Feb 2025

*Python · Typer · Ollama (local LLM) · Pydantic · Rich · ZSH · Pytest*

- Safety-first AI shell assistant translating natural language to executable shell commands via local LLMs — no cloud dependency, full privacy.
- Implemented risk scoring engine (LOW/MEDIUM/HIGH), dry-run defaults, snapshot/undo system, and 18+ slash commands. Full docs at [a-elhaag.github.io/drift-cli](https://a-elhaag.github.io/drift-cli).

### **Canvas Smith — Full-Stack Boilerplate** 2025

*FastAPI · Vue 3 · Vite · Tailwind CSS · Docker · Azure Container Apps*

- Production-ready single-container full-stack app: FastAPI backend serving Vue 3 + Vite + Tailwind frontend via multi-stage Docker build.
- Includes automated Azure Container Apps deployment script, health endpoints, Swagger UI, and full Docker Compose dev setup.

### **Melo — AI Diet Planner** 2nd Place, MLSA AI Challenge Mar 2025 – Jun 2025

*Python · Azure Functions · Azure OpenAI · React Native · Serverless*

- Fully serverless AI diet planner generating personalised weekly meal plans with real-time adjustments powered by Azure OpenAI.
- Won 2nd place in MLSA AI Project Challenge (Mar–May 2025 cohort).

### **Yuno — AI Voice Language Tutor** Aug 2024 – Oct 2024

*Python · Azure OpenAI (GPT-4o) · Azure Speech SDK · TTS*

- AI voice tutor using Azure Speech-to-Text and GPT-4o for real-time conversational language learning with live grammar and vocabulary feedback.

### **AI Recipe Generator** Dec 2024 – Present

*React.js · Azure Functions (Python) · LangChain · Azure OpenAI · Azure Static Web Apps*

- MLSA project: personalised meal suggestions using LangChain + Azure OpenAI, deployed on Azure Static Web Apps with serverless Python backend.

### **CampusOps — Student Event Management Platform** Feb 2026 – Present

*Web · Event Management*

- Event management platform for student clubs and campus organisations, streamlining activity coordination and participation tracking.

### **Handheld Arcade Console** Google Gemini Challenge 2025

*Raspberry Pi Pico · MicroPython · Google Gemini API*

- Physical handheld arcade console integrating Google Gemini API for AI-assisted gameplay; submitted to DEV Google Gemini Challenge.

### **ShadFlow — CPU Scheduler Visualizer** Nov 2024 – Dec 2024

*Python · PySide6 · Pandas · Matplotlib · PyQtGraph*

- Desktop visualizer for CPU scheduling algorithms (FCFS, SJF, Round Robin, Priority) with real-time Gantt charts and performance metrics.

## EDUCATION

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### **B.Eng. Software Engineering & Information Technology** Sep 2022 – Jun 2027

*Egyptian Chinese University · Cairo, Egypt*

### **High School Diploma** Sep 2019 – Aug 2022

*Qaitbay Language School · Cairo, Egypt*

## CERTIFICATIONS

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### Cloud & AI

<b>Microsoft Certified: Azure AI Engineer Associate (AI-102)</b> · Microsoft	Aug 2025
<b>Azure Responsible AI Workshop — Coach</b> · Microsoft	Jan 2024
<b>Machine Learning Specialization (3 courses)</b> · DeepLearning.AI & Stanford	Jul 2023
<b>Machine Learning Pipelines with Azure ML Studio</b> · Coursera Project Network	Jun 2023
<b>Natural Language Processing with Classification &amp; Vector Spaces</b> · DeepLearning.AI	Aug 2023
<b>Exploratory Data Analysis for Machine Learning</b> · IBM (Coursera)	Feb 2023

### Software Development

<b>Neo4j Certified Professional</b> · Neo4j	Aug 2025
<b>Postman API Fundamentals Student Expert</b> · Postman	Mar 2025
<b>Learn TypeScript</b> · Scrimba	Mar 2025
<b>Career Essentials in GitHub Professional Certificate</b> · GitHub	Jan 2024

### Professional & Leadership

<b>McKinsey Forward Program</b> · McKinsey & Company	Dec 2024
<b>IBM Design Thinking: Quantum Business Foundations</b> · IBM	Feb 2025

## RESEARCH PUBLICATIONS

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### **Cancer Treatment Protocol Advisor: Mobile Application Sets the Treatment Regimens**

*Flutter · AI in Healthcare · Oncology — Mobile app assisting oncologists with chemotherapy dosage, scheduling, and drug combinations for seven cancer types.*

### **An Integrated IoT Smart Cane for the Blind and Visually Impaired Individuals**

*IoT · Assistive Technology · Arduino — SolidWorks & Arduino smart cane with ultrasonic sensors and real-time hazard alerts via Blynk.*

## COMMUNITY & AWARDS

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- Gold Microsoft Student Ambassador — Gold tier (top level), Microsoft MLSA programme
- Gold Scout — Microsoft for Startups
- Founder & President — Microsoft Student Club, Egyptian Chinese University
- Ambassadors Projects Team Lead — Microsoft Learn Student Ambassadors (Jun 2025)
- 2nd Place — MLSA AI Project Challenge, Mar–May 2025 Cohort (Melo)
- GitHub Copilot CLI Challenge submission — Drift CLI (Feb 2025)
- Google Gemini Challenge submission — Handheld Arcade Console (2025)