**Ziad Emad Allam | Full stack developer**

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**Summary**

### Full Stack Developer

delivering data‑heavy React/Next.js apps and secure Node/Express APIs. Shipped 10+ MERN projects (4.8 - rating). Built analytics dashboards (+15% engagement) and CI/CD pipelines (−70% manual deployment time). Created Python/C# QA tooling for embedded systems, replacing LabVIEW (−$5k/yr) and achieving 86% test automation. Deployed LLM features deflecting ~30% support tickets and improving response accuracy by 25%.

# Education

### Bachelors of Computer and Information systems Tanta University, Egypt (10/2023 – 06/2027)

Relevant coursework: Data Structures, Algorithms, Software Development

### Diploma in Data Analysis from The American University in Cairo. (07/2024 – 07/2025)

Relevant coursework: Advanced Python - GPA (3.8)

# Work Experience

### Full–stack developer at Upwork Freelance. (11/2022 - Present)

Engineered and delivered 10+ full-stack MERN projects for global clients, achieving a 4.8 average satisfaction rating. Developed analytics dashboards that led to a 15% increase in user engagement for a key client's application.

Implemented CI/CD pipelines that reduced manual deployment time by over 70%.

### R&D Software Engineer at Elaraby Group (part time). (06/2024 - Present)

Build Python/C# QA tooling for embedded firmware—reusable test harnesses, automated data acquisition, and signal/sensor analytics (NumPy, SciPy, Pandas, Matplotlib; FFT, filtering, anomaly detection).

Replaced LabVIEW with Python pipelines (saving $5,000/year) and raised automation from 40% to 86%; integrated with Dassault 3DEXPERIENCE (PLM/Project Management) for traceable defect reporting and faster triage via interactive visuals.

### Software Engineer at OpenQQuantify (part time). (02/2025 - Present)

Deployed LLM-powered features that automated 30% of customer support queries, improving response time. Engineered and optimized prompts to enhance AI response accuracy by 25%.

# Projects

### Project Management System

Tech: React.js, Material UI, Framer Motion, Node.js, Express.js, MongoDB, JWT, Socket.IO | Freelance REPOSITORY [GitHub](https://github.com/ziademad02153/project-management-system.git) Private

Built a scalable project and task management platform on the MERN stack with JWT authentication and role‑based access control (RBAC). Implemented real‑time updates and in‑app notifications via Socket.IO to boost team collaboration.

Delivered an analytics dashboard with advanced filtering, search, and intuitive task prioritization.

Designed a responsive, modern UI (Material UI + Framer Motion) and a robust REST API with validation, pagination, and structured error handling; supports customizable workflows and cross‑platform use.

### Software Testing APP for Home Appliances:

Tech: Python (NumPy, SciPy, Matplotlib), C#/.NET, Git, CI/CD | Elaraby Group REPOSITORY [GitHub](https://github.com/ziademad02153) Private

Built Python- and C#-based test tooling used by QA teams to validate software for microwaves, air conditioners, and water heaters. Implemented data acquisition and signal-processing modules.

Delivered CLI/GUI utilities to orchestrate test cases, batch runs, and reporting; integrated output with 3DEXPERIENCE for defect tracking. Enabled higher automation coverage and reduced manual analysis time via interactive visualizations and reusable test harnesses.

### Advanced Digital Signal Analysis System Tech: (Python, NumPy, SciPy, Matplotlib) | Elaraby Group

### REPOSITORY [GitHub](https://github.com/ziademad02153/Python-application-for-analyzing-and-testing-digital-signals.git)

Developed a Python-based application for Elaraby Group’s software lab to replace LabVIEW, saving $5,000 annually in subscription costs and eliminating the need for a dedicated LabVIEW developer.

Implemented noise reduction, FFT, and signal filtering algorithms, enabling 86% automated testing for audio and sensor data processing with 20% improved signal clarity.

Integrated Matplotlib for interactive visualizations, streamlining debugging and performance optimization in signal processing workflows.

### Home Appliance Control App (IoT) Tech: C++, Dart, Swift, Node.js| Freelance REPOSITORY [GitHub](https://github.com/ziademad02153/IOT-APP-2VR.git)

Remote control and real‑time monitoring of smart home appliances with secure device‑cloud communication. Modular architecture across firmware (C++), backend (Node.js), and mobile clients (Dart/Swift).

Custom automations (schedules/rules/triggers) for a seamless smart‑home experience.

## Certificates:

AUC Diploma in Data Analysis with Python, The American University in Cairo GPA (3.8).

CS50 HARVARD University.

English language test from IELTS (C2).

Artificial Intelligence course from Google.

Cisco Certified JavaScript Course.

Node JS course Free code camp Platform scalable, real-time applications with efficient JavaScript runtime.

TypeScript Course from Free code camp Platform

Microsoft Certified course Develop AI Agents using Azure OpenAI and the Semantic Kernel SDK.

Certified Agile tester Automation Testing course.

Microsoft Implement authentication by using the Microsoft Authentication Library.

Microsoft Certified Explore API Management.

Microsoft Certified Develop solutions that use Azure Cosmos DB.

Microsoft Certified Develop solutions that use Blob storage.

Microsoft Certified Develop for storage on CDNs.

Microsoft Certified Developer Career Path.

Certified Python associate certification from DataCamp.

## Language skills:

**Arabic C2** · **English C2**

## Technical skills:

**Frontend:** HTML5, CSS3, Tailwind CSS, JavaScript, TypeScript, React, Next.js, Vue, Angular, Framer Motion

**Backend & APIs:** Node.js, Express, Python (FastAPI, Flask), PHP, REST, JWT/RBAC, WebSockets/Socket.IO

**Data & AI:** NumPy, SciPy, Pandas, Matplotlib; n8n, LLMs (AI Agents), Prompt Engineering

**Databases:** MongoDB, PostgreSQL, MySQL, SQLite

**DevOps & Cloud:** Git, GitHub, CI/CD, AWS, Supabase**.**

**Analysis& Automation:** Python (NumPy, Pandas, Matplotlib, TensorFlow, Pytorch, Selenium, Pytest, Tkinter, PyQt, PySide)

## Personal skills:

Ownership‑driven, product‑minded collaborator with clear communication, analytical problem‑solving