

# Loay Mahmoud

Software Engineer | Product · Full-Stack · Cloud · AWS Certified

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## SUMMARY

Product-minded software engineer with **5 years** of experience at startups and scale-ups in the US, Germany, and Egypt. I work directly with clients, founders, and users to turn feedback into shipped features. Former university TA; now a CS Ph.D. student at IU Indianapolis.

## EXPERIENCE

### Research Assistant (Part-time)

Aug 2026 – Present

Indiana University Indianapolis – CyberWater

Indiana, USA (On-Site)

- Work directly with CyberWater's users (researchers and Ph.D. students at IU & Pitt), turning feedback into prioritized fixes.
- Refactor and modernize the CyberWater server, APIs, and auto-update system for reliability, security, and maintainability.

### Sr. Software Engineer (Full-time)

Sep 2025 – Aug 2026

MNT-Halan

Giza, Egypt (On-Site)

- Built and scaled FinTech-grade ERP modules (accounting, payments, reporting) with Python/Odoo, OWL/JS, and Elixir/Phoenix.
- Gathered requirements from Odoo implementation partners and the accounting team, turning finance workflows into features.
- Led a full Odoo migration that made core financial workflows **5x faster**; prototyped MCP servers for internal LLM tools.

### Teaching Assistant (Part-time)

Sep 2022 – June 2026

Cairo University

Giza, Egypt (On-Site)

- Taught tutorials and labs for 3 years: Software Engineering, OOP, Compilers, Advanced Databases, Modeling, and Algorithms.
- Created new labs, exercises, and quizzes, and mentored student teams through semester-long software projects.

### Software Engineer II (Full-time)

Sep 2024 – Sep 2025

VCloud LLC

Nevada, USA (Remote)

- Product engineer for **VOCCS**, an omnichannel contact-center platform used by **hundreds of agents at a global pharma client**.
- Led weekly client meetings to gather feedback and demo features; demoed to prospective clients' sales and technical teams.
- Replaced static image call scripts with **dynamic agent scripts** after agents reported the images were misleading and overwhelming.
- Refactored backends into modular services on Twilio/AWS Connect (TaskRouter call routing); set up CI/CD on GCP/AWS.

### R&D Backend Engineer (Contract)

Sep 2024 – Oct 2024

Turing

USA (Remote)

- Contributed to the SFT Code Interpreter team, training LLMs and AI agents for a MAANG company.

### Data Engineer (Part-time)

May 2024 – Aug 2024

Pleny

Dubai, UAE (Remote)

- Unblocked the app launch by fixing data bugs and refactoring validation jobs (Nest.js, MongoDB/Mongoose).

### Software Engineer

Mar 2022 – Aug 2024

Keepoala

Munich, Germany (Remote)

- Worked directly with the CTO and CFO (product owner) to build a returns dashboard and loyalty app for online shoppers.
- Helped **nearly triple the user base** by shipping features end-to-end across Node.js backends and React/Next.js frontends.
- Built Shopify and Billbee integrations and set up Sendinblue email marketing to drive shopper engagement.
- Migrated Firestore to PostgreSQL (Prisma); automated deployments with AWS (Docker, ECS) and CI/CD on all repositories.
- Added a backend testing framework (Mocha, Sinon) and Redis caching for the shop plugins (TypeScript).

### Software Engineer (Internships & Freelance)

Aug 2020 – Sep 2022

\_VOIS (Vodafone), Ministry of Water Resources & Irrigation, Master Micro, NajahNow

Egypt

- Built the Accounts Management feature of the My Vodafone app with the Android core team at \_VOIS (Kotlin, Agile/Scrum).
- Sole developer of a Flutter/Firebase field app for the Ministry's site engineers; moved Master Micro's CI to Jenkins.

## EDUCATION

### Indiana University Indianapolis

Aug 2026 – Present

Ph.D. in Computer Science. Awarded an Indiana University Fellowship.

Indiana, USA

### Cairo University

Sep 2017 – June 2022

B.Sc. Computer and Communication Engineering. Graduated with Honors, GPA 3.65/4.0, ranked 15th in class.

Giza, Egypt

## SKILLS

**Product:** Client discovery & demos, requirements gathering, feature scoping, Agile/Scrum, Jira

**Languages & Frameworks:** TypeScript, Python, Elixir, PHP · React/Next.js, Node.js, Nest.js, Phoenix, Odoo, Laravel, FastAPI

**Data & Cloud:** PostgreSQL, MySQL, MongoDB, Redis · AWS (ECS, S3, RDS, Connect), GCP, Docker, GitHub Actions

**Integrations & AI:** Twilio (TaskRouter), Shopify, Billbee, Sendinblue · MCP, LLM training data (SFT)

## CERTIFICATIONS & AWARDS

- AWS Certified Developer – Associate (2024) · 5th place, Dell Envision Future Competition · FIRST LEGO League: 1st in Egypt, Top 25 worldwide