

Paula Magdy

Software Engineer

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📍 Cairo, Egypt

PROFILE

Full-Stack Software Engineer building and scaling modern software systems using technologies such as PHP, JavaScript, TypeScript, Python, and cloud platforms. My work spans database design, backend APIs, frontend applications, infrastructure, and CI/CD pipelines. I focus on delivering scalable, reliable, and maintainable solutions while taking ownership of the full development lifecycle — from architecture to deployment.

EDUCATION

Bachelor's degree, Computer Science and Information Systems

2018 – 2022

October 6 University

Giza, Egypt

- **Courses:** Relevant Coursework: Algorithms, Data Structures, Cloud Computing, Database Systems, Software Engineering.
- **Graduation project (A):** Learning Management System (Node.js, Express, MongoDB)

PROFESSIONAL EXPERIENCE

Challenge Group Company — Full-Stack Software Engineer

Oct 2025 – Present

Cairo, Egypt

- Owned end-to-end technical implementation of the Make it in the Emirates Awards platform (MoIAT) — a government-grade system for the UAE Ministry of Industry & Advanced Technology, supporting 2,000+ concurrent users.
- Architected PostgreSQL schemas using Prisma ORM with targeted indexing and query-tuning strategies, reducing API latency by 35% under production traffic.
- Built domain-driven full-stack modules using Next.js (frontend) and NestJS (backend), reducing feature rollout time by 25% through clear architectural separation and reusable abstractions.
- Designed and implemented AWS infrastructure (VPC, EC2, RDS, S3, CloudFront, IAM, Secrets Manager) and established container-first deployment pipelines (Docker → ECR → ECS via CodeBuild/CodePipeline), cutting deployment time from ~20 minutes to under 5 minutes.
- Implemented centralized monitoring and structured logging via AWS CloudWatch, reducing production issue detection time by 40%.
- Enforced comprehensive security posture: JWT authentication, RBAC authorization, structured validation, and API hardening aligned with enterprise security standards.
- Built a full testing pyramid across frontend and backend: unit tests (Vitest), component tests (React Testing Library), and E2E tests (Playwright) to ensure release stability.
- Optimized SEO architecture using server-side rendering, structured metadata strategy, and schema markup.

Information Technology Institute (ITI) — Full-Stack Development Fellow

Nov 2024 – Jun 2025

Government-Sponsored Intensive Software Engineering Program

Cairo, Egypt

- Completed a rigorous, government-sponsored engineering program equivalent to ~1,200 hours of hands-on training in full-stack development, system design, and cloud deployment.
- Built full-stack applications using React, Node.js, Django, and Flask; implemented secure RESTful APIs with structured authentication flows and role-based access control.
- Designed relational and NoSQL schemas applying normalization and indexing strategies that improved query performance by 20–30%.
- Containerized and deployed applications to AWS using Docker within Agile development cycles.

Freelance — Front-End Developer

Oct 2022 – Oct 2024

Cairo, Egypt

- Delivered a production-ready e-commerce platform using React and Context API, improving rendering performance and reducing page load times by 20–25%.
- Deepened expertise in component architecture, state management, and frontend performance optimization while completing supplementary coursework in backend systems, cloud infrastructure, and algorithms in preparation for the ITI fellowship.

SKILLS

Frontend: React.js, Next.js, TypeScript, JavaScript, HTML, CSS, Tailwind CSS, Vitest, React Testing Library, Playwright (E2E)

Backend: Node.js, NestJS, Express.js, Django, Flask, Laravel, WebSockets, REST APIs, JWT, RBAC, Jest, Redis

Databases: PostgreSQL, MySQL, MongoDB, Prisma ORM, Query Optimization, Indexing

Cloud & DevOps: AWS, Huawei Cloud, Microsoft Azure, Docker, Kubernetes, CI/CD

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

PROJECTS

Sabeel Mobile Application - Backend Engineer

- Architected normalized relational data models and optimized complex SQL queries, reducing API latency by 30% while supporting thousands of active mobile users.
- Managed full AWS production infrastructure (EC2, S3, IAM, RDS), including provisioning, deployment, monitoring, and maintenance.
- Implemented secure authentication flows, input validation, and backend security best practices throughout the system.

Tools: Laravel, PHP, MySQL, AWS (ECS, ECR, RDS, VPC, ALB, S3, CloudFront, IAM, Secrets Manager, CodeBuild, CodePipeline, CloudWatch), CI/CD.

Egyptian Schools League Platform

- Engineered a modular Competition Engine covering team onboarding, scoring logic, ranking algorithms, and real-time leaderboards — reducing manual administrative workload by 80% and improving processing efficiency by 50%.

Tools: Next.js, React.js, TypeScript, NestJS, PostgreSQL, Prisma ORM, Docker.

Eltanfeethi (Microsoft Azure)

- Led Azure infrastructure configuration, release pipeline management, and production deployment for a client-facing application.

Tools: Microsoft Azure, Azure API Management, CI/CD.

WhatsApp AI Chatbot Automation

- Architected and productionized a serverless AI chatbot integrating Amazon Lex + Twilio, automating 60% of customer support workflows and eliminating manual triage for common request types.

Tools: Python, AWS Lambda, Amazon Lex, Twilio API, AWS Secrets Manager, CloudWatch.