

ALI HAGGAG

SOFTWARE ENGINEER | FINTECH PLATFORMS | ENTERPRISE AI & SYSTEM ARCHITECTURE

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PROFILE Software engineer working at the intersection of mission-critical fintech, scalable platform engineering, and enterprise AI. Contributes to InstaPay, Egypt's leading instant payment platform, with hands-on experience in Spring Boot microservices, PostgreSQL, Redis, React, Next.js, and production performance engineering. Beyond implementation, brings strong system-design judgment, product thinking, technical communication, and the ability to translate ambiguous business needs into secure, maintainable systems.

CAREER IMPACT

NATIONAL-SCALE FINTECH

Contributes to the engineering of InstaPay, a critical part of Egypt's digital-payments ecosystem, supporting millions of active users and high-volume daily financial activity.

MISSION-CRITICAL ENGINEERING

Builds and improves services where availability, correctness, security, and predictable performance directly affect customers and financial operations.

PLATFORM EVOLUTION

Helps shape backend services, data-access patterns, caching, and service boundaries so the platform can absorb growth without sacrificing maintainability.

BUSINESS-TO-TECHNOLOGY TRANSLATION

Turns operational constraints and business objectives into practical architecture, implementation plans, and production-ready solutions.

CROSS-STACK OWNERSHIP

Can reason across backend services, databases, APIs, frontend experiences, and delivery concerns instead of optimizing one layer in isolation.

AI TRANSFORMATION MINDSET

Applies enterprise architecture, governance, developer-experience, and product thinking to emerging AI systems rather than treating AI as a standalone feature.

CORE EXPERTISE

Enterprise Software Architecture	Distributed & High-Availability Systems	Fintech & Payment Platforms	AI Systems & LLM Integration
Spring Boot Microservices	API & Service Design	PostgreSQL & Performance Engineering	Redis & Caching Strategies
React / Next.js Product Engineering	Platform Reliability & Scalability	Technical Discovery & Trade-off Analysis	Product-Minded Engineering

PROFESSIONAL EXPERIENCE

Egyptian Banks Company - Cairo

Nov 2023 - Present

Software Engineer

- Contribute to InstaPay, Egypt's leading instant payment application, helping sustain a trusted national payments experience used by millions of customers.
- Design and evolve Spring Boot microservices for high-volume fintech workloads, balancing performance, modularity, deployment safety, and long-term maintainability.
- Strengthen platform scalability by improving service behavior, PostgreSQL access patterns, indexing, caching, and load distribution as transaction demand grows.
- Investigate performance and reliability issues across application and data layers, turning production evidence into durable engineering improvements rather than one-off fixes.
- Work within strict financial-services expectations for security, correctness, auditability, and operational resilience.
- Collaborate across engineering and business teams to convert complex requirements into clear technical designs and production-ready implementations.
- Contribute to architectural discussions and delivery decisions affecting service boundaries, integration patterns, platform reliability, and future growth.

Frontend Developer

- Delivered React and Next.js products that translated client and business requirements into fast, responsive, maintainable digital experiences.
- Designed reusable frontend foundations and component patterns that improved consistency and allowed teams to deliver new pages and features more efficiently.
- Worked closely with backend engineers to shape API integrations, data flows, error handling, and user interactions as one coherent product experience.
- Improved perceived and measured performance through rendering, loading, responsiveness, and client-side optimization.

ENTERPRISE AI & APPLIED AI EXPERTISE

Applied architecture and R&D experience across enterprise AI platforms, local inference, document intelligence, coding assistants, and agentic workflows.

- **Enterprise AI platform architecture:** Designed a multi-service platform model covering identity, workspaces, AI services, data services, API gateway, model access, governance boundaries, and role-specific AI experiences.
- **AI-powered engineering workflows:** Designed multi-agent workflows for development, quality engineering, DevOps, information security, documentation, test coverage, and code-change support.
- **RAG & document intelligence:** Worked through retrieval, chunking, embeddings, document indexing, context assembly, source grounding, and private enterprise knowledge-assistant patterns.
- **Local and on-device inference:** Evaluated local LLM use on Apple Silicon using Ollama and MLX, including quantized models, privacy-first workflows, hardware constraints, and model-quality trade-offs.
- **Coding-assistant architecture:** Explored IDE-integrated AI assistants, inference servers, prefix/KV caching, latency targets, tool integration, and model evaluation for practical developer use.
- **Agentic systems & tool orchestration:** Designed workflows involving specialized agents, structured outputs, tool execution, approval gates, temporary branches, pull requests, and human review.
- **AI governance & security:** Applies enterprise concerns such as authentication, authorization, tenant isolation, auditability, data privacy, secure model access, and controlled execution.

TECHNICAL EXPERTISE

Backend & APIs	Java, Spring Boot, Express.js, REST APIs, GraphQL, microservices
Frontend	React.js, Next.js, TypeScript, JavaScript, Redux, Tailwind CSS
Data & Performance	PostgreSQL, SQL, indexing, query optimization, Redis, caching, performance tuning
AI & Inference	LLM integration, RAG patterns, embeddings, agent workflows, Ollama, MLX, local-model evaluation
Architecture & Delivery	System design, distributed systems, scalability, reliability, secure coding, Docker, Agile delivery

EDUCATION & PROFESSIONAL DEVELOPMENT

German University in Cairo B.Sc. Architectural Engineering, 2021	Professional Development Java Design Patterns & SOLID Principles Principles of Secure Coding Agile Project Management AWS Machine Learning Engineer - Associate path (in progress)
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