

MOHAMED AYOUB

Software Engineer

Giza, Egypt

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Summary

Software Engineer specializing in C# and .NET Core, building production microservices and RESTful APIs for government and product platforms. Experienced with Java Spring Boot, Apache Kafka, Redis, CI/CD, and Angular. Uses agentic coding in development workflows and brings experience in technical leadership and Agile (Scrum) delivery.

Experience

KLAO

Software Engineer

Nov 2025 – Present

Würzburg, Germany (Remote)

- Configured and deployed production single sign-on (SSO) using **Keycloak** and **OpenID Connect**, enabling centralized authentication and Google sign-in across KLAO applications.
- Integrated **Paddle** for billing and checkout flows.
- Contributed to full-stack development using **React**, **Next.js**, **NestJS**, and **Express.js**, and reviewed Figma designs with UX/UI designers for technical feasibility.
- Led and mentored a full-stack team of 3 engineers, providing technical guidance, code reviews, and delivery ownership.
- Established Scrum delivery practices and translated business requirements into epics, user stories, and sprint tasks.

Sumerge

Associate Software Engineer

Dec 2023 – Nov 2025

Maadi, Egypt (Hybrid)

- Developed and maintained 20+ backend **microservices** in **.NET Core** and **Java Spring Boot**, exposing **RESTful APIs** for government projects serving over 3 million active users; resolved 30+ critical bugs.
- Designed and implemented batch and stream processing microservices using **.NET Core**, **Java Spring Boot**, **Apache Kafka**, and **Redis**, handling millions of records.
- Analyzed **Entity Framework Core** command execution logs to identify database performance issues and optimize read queries.
- Achieved 90%+ test coverage across service codebases using **NUnit**, **JUnit**, and **Mockito**, meeting customer coverage requirements.
- Automated build and deployment pipelines using **Jenkins**, **Kubernetes**, and **Azure DevOps**.
- Mentored and onboarded 20+ junior and newly joined engineers.
- Owned task breakdown and sprint task distribution, and clarified technical requirements in client-facing meetings.

Technical Skills

Programming Languages: C#, Java, TypeScript, C++

.NET Ecosystem: .NET Core, ASP.NET Core Web API, Entity Framework Core, LINQ, RESTful APIs

Java & Spring: Spring Boot, Spring Data JPA, Spring Security

Backend & Architecture: Microservices Architecture, Camunda BPMN, NestJS, Express.js, Keycloak

Frontend Technologies: Angular, React, Next.js

Data & Messaging: Apache Kafka, Redis

Databases: Microsoft SQL Server, PostgreSQL, Oracle Database

Testing: NUnit, JUnit, Mockito, Jasmine, Karma

DevOps & CI/CD: Azure DevOps, Docker, Jenkins, GitHub Actions, Kubernetes

Concepts & Principles: Data Structures, Algorithms, Object-Oriented Programming (OOP), Design Patterns, SOLID Principles

Agentic Coding: Codex, Claude Code, OpenCode, Agent Skills, AI-assisted development workflows

Tools & Collaboration: Git, GitHub, GitLab, Jira, Figma

Projects

Fandem AI <i>NestJS, Next.js, Postgres/pgvector, Drizzle</i>	<i>Private repo</i> fandemai.com
<ul style="list-style-type: none">• Built a multi-tenant SaaS platform serving an AI-powered chat widget for MENA e-commerce, delivered as an embeddable Vanilla TypeScript Web Component (Shadow DOM) backed by NestJS and a Next.js dashboard.• Engineered Arabic-aware retrieval-augmented generation (RAG) using Cohere embeddings stored in Postgres + pgvector, with intent routing across Gemini models via the Vercel AI SDK for accurate, context-grounded responses.• Designed a type-safe monorepo with Drizzle ORM and shared Zod schemas across all packages, containerized with Docker (Node.js, pnpm) for reproducible local development.	
MovieHub <i>Java 17, Spring Boot, Angular 17</i>	GitHub
<ul style="list-style-type: none">• Built a full-stack movie catalog using three Spring Boot microservices, Angular, and MySQL, with JWT authentication, service-to-service authorization, a paginated REST API, and unit tests using JUnit and Mockito.	

Open Source Contributions

OpenTelemetry Java <i>Java, Distributed Tracing</i>	Oct 2026
<ul style="list-style-type: none">• Fixed malformed URL-encoded header handling in the Jaeger propagator, preventing exceptions during trace-context extraction and preserving the input context; added a regression test (merged PR #8912).• Submitted a B3 multi-header propagation fix with regression tests to prevent stale debug flags from affecting sampling when carriers are reused (PR #8930).	

Education

Misr University for Science and Technology	Sep 2019 – Jun 2023
<i>Bachelor’s Degree in Computer Science, GPA: 3.67/4.00 (Excellent)</i>	<i>Egypt</i>

Certifications

AWS Certified Cloud Practitioner	Oct 2024
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Core Competencies

Technical Leadership | Ownership & Accountability | Mentorship | Analytical Problem Solving | Cross-Functional Collaboration | Stakeholder Communication | Adaptable & Continuous Learner

Leadership / Extracurricular

Egyptian Collegiate Programming Contest (ECPC)	2020 – 2023
<i>Community Leader</i>	<i>Misr University for Science and Technology</i>
<ul style="list-style-type: none">• Established a structured mentoring system supporting over 1,000 students, increasing participation in mentoring and training activities by 250% compared with previous years.• Negotiated with Coach Academy to secure over 5 free courses for coaches offering paid problem-solving training.• Secured \$3,000 in university funding covering 100% of ECPC participants’ registration fees, accommodation, transportation, and meals; competition participation increased by 120% compared with previous years.	