

Khaled Mohamed Ali

Software Engineer

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PROFESSIONAL SUMMARY

Results-driven Full-Stack .NET Software Engineer (B.Sc. Computer Science, Assiut University — July 2026) with proven expertise designing scalable back-end architectures, high-performance RESTful APIs, and domain-driven solutions using C#, ASP.NET Core MVC/Web API, Entity Framework Core, and SQL Server. Certified AI-Empowered Engineer with demonstrated proficiency in LLM prompt engineering and AI-assisted development workflows. Proven track record through MCIT-backed internships and production-grade software delivery. Ready to drive immediate, high-velocity technical impact in fast-paced engineering teams.

EDUCATION

Bachelor of Computer Science

Assiut University — Faculty of Computers and Information | Graduated: July 2026

- Graduation Project: BloodBridge (Blood Donation Management Platform) — Grade: Excellent / A+
- Relevant Coursework: Data Structures and Algorithms, OOP, Database Systems, Software Engineering, Operating Systems, Computer Networks.

TECHNICAL SKILLS

Back-End Development: C#, ASP.NET Core MVC, ASP.NET Core Web API, Entity Framework Core, LINQ, RESTful APIs, OOP, SOLID Principles, Design Patterns, Clean Architecture, Dependency Injection, Async/Await, Microservices

Databases: Microsoft SQL Server, T-SQL, Stored Procedures, Query Optimization, Relational Data Modeling, LINQ to Entities

AI and Productivity: GitHub Copilot, ChatGPT, Claude AI, Cursor IDE, AI-Assisted Development, LLM Prompt Engineering (Certified)

Systems and HPC: C++, Multithreading, TCP/IP Socket Programming, MPI, OpenMP, Parallel Computing, Compiler Construction

Front-End Development: HTML5, CSS3, JavaScript ES6+, Bootstrap, Responsive UI/UX Design

DevOps and Tools: Git, GitHub, Docker, Postman, Swagger/OpenAPI, xUnit/NUnit, Agile/Scrum, CI/CD Concepts

Programming Languages: C#, C++, Python, Java, C, SQL, JavaScript

Core Competencies: Data Structures and Algorithms, Competitive Programming (150+ ICPC Problems Solved), Software Architecture

PROFESSIONAL EXPERIENCE

Full-Stack .NET Web Developer — Intern

Digital Egypt Pioneers Initiative (DEPI), Ministry of Communications and IT (MCIT) — Cairo, Egypt

June 2025 – December 2025

- Engineered enterprise-grade full-stack web applications using C#, ASP.NET Core MVC, and Web API, adhering to Clean Architecture and RESTful service design principles.
- Designed relational database schemas in SQL Server using Entity Framework Core and LINQ, enhancing data querying efficiency and structural integrity.
- Implemented containerized deployment workflows using Docker; practiced Agile/Scrum collaboration via Git/GitHub and wrote rigorous unit tests using xUnit.

Web Designer and Front-End Developer — Intern

Digital Egypt Youth (DEY) / NTI, MCIT — Creativa Innovation Hubs, Egypt

July 2025 – August 2025

- Developed responsive, cross-browser-compatible web interfaces using HTML5, CSS3, and JavaScript (ES6+), prioritizing accessibility and UI/UX best practices.

TECHNICAL PROJECTS

BloodBridge — Blood Donation Management System [Graduation Project — Grade: Excellent / A+]

C#, ASP.NET Core Web API, Entity Framework Core, SQL Server, JWT, Clean Architecture

- Architected a production-ready platform connecting donors, hospitals, and recipients with JWT role-based authorization and role-specific workflows.
- Designed scalable SQL Server schemas for blood inventory management, donation tracking, and automated urgent-request matching.
- Applied domain-driven Clean Architecture with repository pattern, SOLID principles, and HIPAA-aligned data security measures.

Full-Stack Hotel Reservation System

C#, ASP.NET Core Web API, Vanilla JavaScript, JWT, SQL Server

- Built enterprise-grade hotel management platform with RESTful APIs, JWT role authentication, real-time room availability engine, and admin dashboard for bookings and revenue analytics.

TCP Multithreaded Client-Server File Compressor

C#, .NET, TCP Sockets, GZip Algorithm, Multithreading

- Engineered a high-speed concurrent file transmission and real-time GZip compression system over TCP sockets, with optimized connection pools for minimal memory footprint.

DRCompiler — Custom Compiler Front-End

C#, Compiler Construction, Parsing Algorithms

- Implemented lexical analysis (tokenizer), recursive-descent parsing, AST construction, and semantic validation from scratch in C#.

Hybrid MPI and OpenMP Parallel Computing System

C++, MPI (Distributed Memory), OpenMP (Shared Memory)

- Designed a hybrid parallel computing architecture combining MPI and OpenMP to accelerate matrix multiplication and I/O workloads across multi-core clusters.

Recaudo and Safety UG — Corporate Security Website

HTML5, CSS3, JavaScript, Responsive UI/UX

- Delivered a high-performance responsive corporate website for an international security firm headquartered in Berlin, Germany.

CERTIFICATIONS

Full Stack .NET Web Developer | Digital Egypt Pioneers Initiative (DEPI), Ministry of Communications and IT (MCIT)

Web Designer -Digital Egypt Youth | National Telecommunication Institute (NTI), Ministry of Communications and IT (MCIT)

Foundational C# with Microsoft | freeCodeCamp and Microsoft

LLM Prompt Engineering — One Million Prompters | Dubai Future Foundation

InnovEgypt — Entrepreneurship and Innovation | TIEC / ITIDA

LANGUAGES

Arabic: Native | English: Professional Working Proficiency (B2)