

Omar Ahmed

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Education

MSA University

Sep. 2022 – June 2026

- Bachelor of Computer Science – Software Engineering
- GPA: 3.31
- Egypt, Cairo

University of Greenwich

Sep. 2024 – June 2026

- Bachelor of Computer Science – Software Engineering
- GPA: 3.0
- UK, Greenwich

skills

- | | | | |
|--------------------------|---------------------------------|------------------|------------------|
| - Backend development | - ASP.Net core | - MySQL | - Git and GitHub |
| - Docker | - Laravel / php | - C-Sharp | - SQL |
| - Familiar with react js | - OOP Concepts – Design Pattern | - Redis | - C++ - Python |
| | - Familiar with Hosting | - Data Structure | |

Experience

Summit technology solutions

July 2024 – August 2024

Software Engineer Intern

Cairo, TAG

- Developed backend components using **C#** and **.NET Core**, focusing on **RESTful API** development and enhancing code quality through best practices.
- Gained strong skills in **SQL Server** for relational database management, including creating tables, optimizing queries, and ensuring data integrity.
- Worked collaboratively in cross-functional teams, contributing to design and implementation phases and meeting project timelines.
- Supported debugging, troubleshooting, and version control using **Git**, enhancing code stability and efficiency.

Projects

EShop-Microservices API/ Developed in **ASP.NET** | source code: <https://github.com/3morii74/eCommerce-microservices>
Feb2025 - now

- Developed an e-commerce application using **.NET 8** microservices architecture, implementing Catalog, Basket, Discount, and Ordering modules with **ASP.NET Core Web API**.
- Designed and applied **Domain-Driven Design (DDD)**, **CQRS**, and **Clean Architecture** principles using **MediatR**, **FluentValidation**, and **Mapster** for scalable and maintainable code.
- Built inter-service communication using **RabbitMQ** for asynchronous event-driven messaging (Publish/Subscribe model) and **gRPC** for synchronous communication between Basket and Discount microservices.
- Implemented **Yarp API** Gateway with reverse proxy, configuring routing, rate limiting (FixedWindowLimiter), and transformations for efficient microservice orchestration.
- Utilized multiple databases, including **PostgreSQL** (with Marten for **DocumentDB**), **Redis** (distributed caching), **SQLite**, and **SQL Server**, with Entity Framework Core for ORM and migrations.
- Containerized microservices using **Docker**, orchestrating multi-container environments with Docker Compose, and managed environment overrides for development and production.
- Integrated cross-cutting concerns such as logging, global exception handling, and health checks to ensure robust microservice operations.
- Developed the **Catalog** microservice with **Vertical Slice Architecture**, **Minimal APIs** (using Carter library), and **CQRS** validation pipelines with MediatR and FluentValidation.
- Enhanced **Basket** microservice with **Redis** caching, proxy/decorator patterns, and MassTransit for publishing BasketCheckout events to **RabbitMQ**.
- Applied **SOLID** principles, **dependency injection**, and **design patterns** to write high-quality, **loosely coupled** code in a

layered architecture (Core, Application, Infrastructure, Presentation).

- Gained hands-on experience with **.NET 8** and **C# 12** features, including Minimal APIs, while following best practices for microservices development in a cloud-native environment.

Project Management System / Developed in Laravel

July 2024

- Built a comprehensive **project management system** using **Laravel**, providing features for task assignments, progress tracking, and team collaboration.
- Implemented **user authentication** and **role-based access control** to secure different functionalities for various user roles.
- Designed a clean, user-friendly interface with **responsive design** to ensure accessibility across devices.
- Utilized **MySQL** as the backend database, optimizing for efficient data retrieval and storage.

Dessert Elegante/ Laravel, php, MySQL

May 2024

- Developed an online **e-commerce platform** for **Dessert Elegante**, specializing in premium dessert products.
- Built with a focus on **user experience**, featuring a visually appealing design and an intuitive navigation structure.
- Leveraged **Laravel** (or another tech stack, if applicable) to manage product listings, inventory, and user accounts.
- Created an **admin dashboard** for managing products, inventory, orders, and user accounts, providing efficient control over the shop's operations.

Real-Time Chat Application / Laravel, Pusher, livewire

August 2024

- Developed a **real-time chat application** with instant messaging features, allowing seamless communication between users.
- Implemented using **WebSocket** (or a relevant real-time library, e.g., Pusher, Firebase) to ensure low-latency, instant message delivery.
- Designed a simple, user-friendly interface that supports features like **message read receipts**, and **online status** tracking.

HONORS/ AWARDS

Best Project in The Second Year

December 2023

MSA University

- Developed a comprehensive full-stack project utilizing React.js and PHP, showcasing proficiency in both front-end and back-end development. The project encompasses a multifaceted web platform featuring gym progress tracking, an integrated marketplace, and social media communication functionalities akin to Instagram. -source code of the project <https://github.com/AmrMohamedNabih/x-gym>