Mahmoud Mohamed Abdalaziz

Software Engineer

✉ mahmoud.abdalaziz@outlook.com 📞 01019083452 📍 Cairo, Egypt ○ Github in LinkedIn

PROFILE

Full-stack .NET Developer with solid hands-on experience building scalable web applications using ASP.NET Core, Entity Framework, and modern front-end tools. Proficient in layered architecture, RESTful API design, and object-oriented programming. Passionate about clean code, problem-solving, and delivering maintainable software solutions. Actively developing real-world projects and continuously expanding knowledge through technical reading and experimentation.

EXPERIENCE

Programming Instructor, *Self-employed*   01/2023 – 01/2024
- Taught students how to solve problems using C++, Object-Oriented Programming   Zagazig, Egypt
  (OOP), and Data Structures.
- Provided practical guidance and hands-on learning experiences to help students
  develop problem-solving skills and improve their programming abilities.
- Assisted students with their graduation projects

IT Technical Support Specialist, *Al-Qadisya for Computer Maintenance*   01/2019 – 01/2024
- Diagnosed and repaired hardware issues in desktops and laptops.   Zagazig, Egypt
- Installed and configured operating systems (Windows/Linux), essential drivers,
  and software suites.
- Performed system formatting, data backup, and recovery, and network setup.
- Built custom PCs for clients based on performance needs and budget, providing
  hardware recommendations and guidance.

Education

Higher Postgraduate Diploma in Computer Science,   09/2023 – 07/2025
Faculty of Graduate Studies for Statistical Research   Cairo University
- A two-year academic program providing solid theoretical and practical
  knowledge in core computer science fields. The diploma is equivalent to a CS
  bachelor's and qualifies for a Master's degree.
- GPA: 3.3/4.0 - Very Good (B+)
- *Graduation Project:* Full-Stack Clinic Management System – Grade: Excellent (4.0)
  GitHub Repo ⧉

Bachelor's degree in commerce, *Faculty of commerce*   09/2017 – 07/2021
                                                                                    Zagazig university

CERTIFICATION & TRAINING

Foundational C# with Microsoft – FreeCodeCamp
Certificate Link ⧉

CS50x: Introduction to Computer Science – Harvard University
Certificate Link ⧉

Additional Certificates (Git, SQL, Web, OOP, etc.)
Certificate Link ⧉

PROJECTS

LitraLand, *Full-Stack Web Application*
A web-based system for managing physical libraries and enabling user-driven book sharing, exchanging, and selling.

- Designed and implemented a multi-role system: Admins (library staff) and Users (readers).
- Developed full-stack features for book uploads, transactions, user profiles, and admin-level control.
- Integrated third-party services: Google/Facebook login, WhatsApp API notifications, SMTP email, Cloudinary for image hosting.
- Used background processing via Hangfire for scheduling reminders and updates.
- Built using .NET Core MVC, SQL Server, EF Core, AutoMapper, Bootstrap, jQuery, Cloudinary, Hangfire, OAuth, and a layered architecture.
- Project Demo ⧉ • ERD ⧉ • Schema ⧉ • GitHub Repo ⧉

Survey Basket, *Survey Management System*
A RESTful Web API for managing surveys, questions, answers, participants, and results, designed with scalable architecture and secure authentication.
- Developed full-featured endpoints for surveys, questions, answers, participation, and result analysis.
- Implemented JWT-based authentication and role-based authorization using Microsoft Identity.
- Designed and built the database schema using Entity Framework Core with Fluent API.
- Used FluentValidation and Mapster for validation and object mapping.
- Integrated background jobs via Hangfire for scheduled email notifications.
- Configured structured logging with Serilog and daily rolling JSON outputs.
- Enabled API versioning, health checks, rate limiting, and CORS configuration for production readiness.
- Built with ASP.NET Core Web API (.NET 9), EF Core, FluentValidation, Mapster, JWT, Hangfire, and Serilog
- GitHub Repo ⧉

STR, *Custom String Handling Class in C++*
A handcrafted C++ string manipulation library that replicates and extends std::string functionality from scratch.
- Built a custom STR class with support for append, insert, erase, replace, substr, and find operations.
- Implemented operator overloading (+, +=, =, [], <<, >>) for intuitive string manipulation.
- Handled memory allocation manually, including deep copies and exception-safe operations.
- Added advanced utility methods like reverseWords, trim, split, and capitalizeFirstLetters.
- Designed with encapsulation, modular functions, and private member variables.
- GitHub Repo ⧉

Mini Frontend Projects, *(UI & Practice Projects)*

- Personal Portfolio Website – Responsive personal site built with HTML, CSS, and JavaScript.
  Live Demo ⧉

- To-Do List App – Interactive JS-based to-do list with local storage and task management.
  Live Demo ⧉

- Admin Dashboard UI – Modern responsive admin interface using Flexbox and CSS Grid.
  Live Demo ⧉

SKILLS

Programming Languages: C# │ C++ │ Python │ JavaScript │ SQL

Databases: 5QL Server │ SQLite

Web Development: ASP.NET Core MVC & Web API │ Razor Pages │ HTML5 │ CSS3 │ Bootstrap │ jQuery │ RESTful API Design │ CORS │ Rate Limiting

Core Concepts: │ OOP │ SOLID Principles │ Clean Architecture │ Dependency Injection │ Data Structures & Algorithms │ Problem-Solving │ Design Patterns

Tools & Technologies: Visual Studio │ VS Code │ Git & GitHub │ Postman & Swagger │ ADO.NET │ Dapper │ Entity Framework Core │ FluentValidation │ Mapster │ AutoMapper │ Microsoft Identity │ JWT Authentication │ Hangfire │ Serilog │ MailKit

Soft Skills: Collaboration │ Problem Solving │ Time Management │ Adaptability │ Critical Thinking │ Attention to Detail │ Communication │ fast learning

ACHIEVEMENTS

- **Solved over 400+ coding problems across multiple platforms, including HackerRank, CodeWars, and personal projects.**

- **Maintained a dedicated Problem Solving GitHub repository documenting solutions, structured explanations, and learning strategies.**

- **Wrote a detailed programming guide within the repository to help beginners approach programming with the right mindset and problem-solving methodology.**

- Hackerrank profile ⊡
- codewars profile ⊡
- Problem Solving GitHub Repository ⊡

Languages

Arabic
Native

English
Professional Working Proficiency