Mohamed Mostafa Nazih

Software Engineer

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EDUCATION

B.Sc in Computer Science, Suez Canal University   **Oct 2021 – Jul 2025**

- Graduation Project Grade: Excellent
- Mentored newcomers and motivated them to continue learning and growing in the Backend fundamentals in Google developer groups.

EXPERIENCE

Oblien   **Aug 2025 – Present**

Founding Engineer | Part-time Hybrid

- Founding engineer at **Oblien**, building a distributed autonomous-agent platform capable of reasoning, generating tools, and deploying them independently.
- Built privacy-focused infrastructure with encrypted secrets, sandbox isolation, and strict data-ownership boundaries.

Medica Scope   **Jul 2025 – Present**

Backend Engineer | Full-time Hybrid

- Developed and maintained backend services for **Medica Academy**, an online medical education platform.
- Integrated the Paymob payment gateway and VdoCipher for secure video streaming and content protection.
- Optimized database queries and API endpoints, reducing average response time by 15%.

Onvo   **May 2024 – Jul 2025**

Software Engineer | Full-time, Remote

- Reworked the backend of **Onvo** from PHP to Express.js, reducing load times by 20% and improving system stability.
- Built and developed a large-scale Q/A application serving more than 150,000 users, supporting features drawings, music suggestions, interactive stories, and real-time Q/A flows.
- Led the launch of Airwave, a platform for streaming podcasts and music, which attracted more than 10,000 users in the first week.
- Secured the backend to prevent DoS and XSS attacks, ensuring a more resilient and secure application.

PROJECTS

Aura Decor (Graduation Project) | ASP.NET, Redis, RabbitMQ, SQL Server   ⬡ **GitHub**

- AuraDecor is a modern furniture management system built with ASP.NET Core 8.0 using a clean architecture.
- It offers AI-powered text and image search, secure JWT authentication, and integrated Stripe processing.
- The system includes an advanced admin panel, RabbitMQ-based notifications, and Docker-ready deployment.

LSMSharp | C#   ⬡ **GitHub**

- Developed a high-performance LSM-Tree storage engine in C# with ACID guarantees, leveled compaction, and crash-safe WAL.
- Optimized for write-heavy workloads with Bloom filters, skip lists, and low-latency read paths.

HungerStation Microservices | .NET 8, SQL Server, Docker, Azure Service Bus, Stripe   ⬡ **GitHub**

- Designed a modular food delivery platform using Clean Architecture, DDD, CQRS, and database-per-service principles.
- Implemented event-driven communication with Azure Service Bus, JWT authentication, Stripe payments, and Dockerized deployment.

Talabat | C#, SQL Server, Redis, Docker, Stripe   ⬡ **GitHub**

- Built a scalable e-commerce API in .NET 6 using Clean Architecture and Stripe payment integration.
- Applied Repository, Specification, and Unit of Work patterns with Dockerized deployment and Redis caching.

SimuKernel | C#, .NET 8 $\qquad$ **⌾ GitHub**

- Developed an operating system simulator implementing CPU scheduling, virtual memory paging, and a mini kernel with process management.
- Supports Round Robin, Priority, and MLFQ schedulers with real-time visualization and detailed performance metrics.
- Built paging simulator with FIFO, LRU, and Optimal algorithms, providing step-by-step visualization and fault/hit statistics.
- Includes a mini in-memory kernel featuring boot sequence, CLI commands, process creation/termination, and memory allocation.

SKILLS

- **Languages and Frameworks:** C#, ASP.NET Core, JavaScript (Node.js, Express.js, Hono, Bun), Python, C++
- **Databases:** SQL Server, PostgreSQL, MongoDB, MySQL, MariaDB, SQLite, Redis, Memcached, AstroDB
- **Cloud & DevOps:** Docker, Nginx, OpenResty, Azure, AWS (EC2, S3), CI/CD (GitHub Actions, Azure DevOps)
- **API & Messaging:** REST, gRPC, RabbitMQ, Azure Service Bus, Stripe, Paymob
- **Testing & Tools:** xUnit, NUnit, Postman, Swagger/OpenAPI
- **Miscellaneous:** Algorithms, Data Structures, OOP, SOLID, Design Patterns, Git, Networking, DBMS, Operating Systems

ARTICLES

- **Difference Between Cluster and Non-Cluster Index** — modev.me/cluster-vs-noncluster
- **3 Ways to Build Custom Middleware in ASP.NET Core** — modev.me/aspnet-middleware
- **Boxing and Unboxing in C#** — modev.me/boxing
- **SimuKernel: OS Concepts Explained** — modev.me/simukernel