

# Mohamed Gomaa Backend Engineer

✉ mo7amed.gom3a.7moda@gmail.com

☎ 01023154225

📍 Egypt - Al Mansurah - Dakahlia

🔗 <https://mo7amedgom3a.github.io/>

🌐 [linkedin.com/in/mohamed-gomaa-626a18249](https://www.linkedin.com/in/mohamed-gomaa-626a18249)

🐙 [github.com/mo7amedgom3a](https://github.com/mo7amedgom3a)

## Professional Summary


Adept software engineer specializing in backend development with strong knowledge of backend and frontend technologies and the full web stack. Proficient in designing large-scale applications using best practices, microservices, and event-driven systems. Skilled in code optimization, DevOps, and version control for seamless CI/CD. Strong communication skills and experience working collaboratively with cross-functional teams to deliver scalable, clean, and robust solutions.

## Education

2021 – present  
Assiut, Egypt  
**Bachelor of Science**  
**Assiut University**  
Gpa : 3.3


## Projects

- 2024/09 – 2024/10

**Programmer's Social Hub** 


**Protfolio Project ALX SE**

a social media microservices platform designed for programmers to share their knowledge, tips, tricks, and code snippets. Users can create and engage with posts, follow other users, comment on discussions, and interact in a vibrant community dedicated to programming and software development.
- 2024/07 – 2024/08

**School Management System** 


**Alx SE Program**

Created a comprehensive School Management System that streamlines administrative tasks for educational institutions. This system allows admins to manage students and teachers, enables teachers to organize classes, assignments, and exams, and helps students track progress, submit homework, and view grades. It is built using .NET, MySQL, REST API, Next.js
- 2024/03 – 2024/04

**Hospital Management System** 

**Assuit Univrity**

Created a Hospital Management System enabling patients to schedule appointments, track progress, and view treatments. Doctors can manage appointments, prescribe treatments, and monitor patient status, while admins handle staff management, hospital statistics, and operations, utilizing .NET, MySQL, Razor Pages, and MVC architecture.
- 2024/03 – 2024/03

**Genetic Algorithm (Ai)** 

**Assuit Univrsity**

Utilized Genetic Algorithm to find efficient routes between cities in the shortest path problem, optimizing for minimal distance or time in transportation, logistics, and telecommunications.

2023/06 – 2023/07

### Simple Shell

#### Alx SE Program

I created a custom Unix-like shell in C, utilizing data structures, algorithms, and file handling. This allowed for the execution of internal and external commands, providing direct system program access. I improved usability through efficient background and foreground process management and implemented strong error handling for clear, informative messages.

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## Skills

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### Programming Languages

JavaScript, Node.js, C#, Python, C, C++,  
Typescript, Bash Script

### Frameworks

Express.JS, ASP .NET Core, React, Next.Js, Flask,  
Django

### System Administration

Linux, Nginx, Apache, Bash Script,  
Troubleshooting, Logging System, Monitoring

### Soft Skills

problem-solving, communication, teamwork,  
critical thinking, organization, strong work ethic,  
and Agile methodology.

### Microservices

Event-Driven Architecture, RabbitMQ, gRPC, CQRS  
Pattern, Logging, Distributed System

### Databases

SQL, Mysql, MongoDB, Redis, Memcached

### DevOps

- Git and GitHub, Docker, Contrairization, Jenkins, Version Control, Kubernetes, Puppet, Terraform, Microservices orchestration, CI/CD pipeline, Automation, AWS cloud, Integration Testing, Unit Testing, Configuration Management, Agile

### API Development

RESTful, GraphQL, Oauth2, Soup, Kong

### Tools

Jira, ClickUp, Miro, GitHub, GitLab, DataDog

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## Courses

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2023/09 – 2024/11

### ALX Software Engineering

#### ALX-Africa

I successfully completed the ALX Software Engineering Program, acquiring hands-on experience in full-stack development, problem-solving, and algorithms. I have developed strong proficiency in Python, C, JavaScript, and databases, with a concentrated focus on real-world projects, system design, and software architecture.

2024/08 – 2024/09

### ALX Ai-ce

#### ALX Africa

Completed the ALX AI-CE Program, a specialized curriculum focused on artificial intelligence, machine learning, and data science. Gained expertise in key AI concepts, including neural networks, natural language processing, and computer vision

2023/02 – 2023/03

### Introduction to Web Development

#### ITI

I completed a web development certificate from ITI Institute, where I gained proficiency in HTML and CSS. I learned to create and style web pages and am eager to apply my skills in real-world projects.