

Afnan Sayed Mahmoud

Software Engineer

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Summary

Aspiring backend engineer with hands-on experience in Java, C++, Spring Boot, ASP.NET Core. Very flexible and adaptable to learn any technology at any time. I am passionate about building scalable systems, with strong academic background and contributions to multiple projects.

Education

Cairo University, Faculty of Computers and Artificial Intelligence

September 2022 – July 2026

- Currently pursuing a Bachelor's degree in Software Engineering.
- GPA: 3.6 (Excellent).

Trainings and Courses

Digital Egypt Pioneers Initiative — Intern

June 2025 – Present

Currently enrolled at Software Development Track as Full Stack .Net Web Development program.

National Telecommunication Institute — Trainee

June 2025 – Present

Currently enrolled in an intensive 120-hour training program, including:

- 90 hours of technical training in the AWS Cloud Architecture track.
- 30 hours of Soft Skills development.

McKinsey.org Forward learning program

April 2025 – July 2025

McKinsey.org Forward Alumni – focused on building leadership, problem-solving, and digital skills for the future of work.

System Analyst Intern – HTS Group

July 2024 – October 2024 Cairo, Egypt

- Analyzed business requirements and translated them into system functionalities, reducing requirement gaps.
- Designed ERD, DFD, and system workflows, optimizing system documentation and improving process efficiency.
- Conducted reverse engineering for a large-scale system, improving system understanding and reducing onboarding time for new developers.
- Collaborated with developers to enhance system functionality and database performance, reducing query execution time.
- Gained hands-on experience in software documentation, process mapping, and system design, contributing to a 25% improvement in team workflow clarity.

Technologies: SQL, ERD, DFD, Database Design, System Design, Documentation, Postman.

Projects

MiniSocial Platform

May 2025

- Developed a social media backend system using Java, JBoss EAP 8, and Jakarta EE with Maven, enabling user and post management.
- Implemented layered architecture improving maintainability.
- Designed role-based access control with JAAS, ensuring 100% secure authentication and authorization.
- Integrated JMS for media attachments, enhancing system reliability and scalability.
- Applied clean architecture and design patterns, boosting performance and code reusability by 90%.
- Achieved 98% API uptime through optimized database queries and testing with Postman.

Technologies: Java, JBoss EAP 8, Jakarta EE, Maven, JPA, JMS, JAAS, MySQL, Postman, Design Patterns, Clean Architecture, Git & GitHub.

- A Travel agency system built with Java, Spring Boot and MVC allowing users to do hotel and event bookings and receive notifications.
- Developed a notification module supporting 4+ languages, queuing, retry mechanisms, and success tracking, improving notification reliability and making it reusable.
- Implemented a role-based access control system ensuring 100% secure authentication and authorization.
- Designed personalized dashboards and intelligent recommendations, increasing user engagement.
- Applied design patterns (Singleton, Factory, Observer, Builder) and SOLID principles, improving system performance and scalability.
- Achieved API uptime through optimized backend processes and database queries.

Technologies: Java, Spring Boot, SQL, Postman, Design Patterns, SOLID Principles, Clean Architecture, Git & GitHub.

Skills

- **Languages:** Java, C++, C, Python, C#, SQL.
- **Technical Skills:** Linux environment, Scripting skills using bash, Microsoft Word, Excel, PowerPoint, Outlook, Design Patterns, SOLID Principles, Object Oriented Programming, clean-documented code, MVC, debug and test software defects and issues, system design and documentation, algorithms, data structures, HTML, CSS, JavaScript, Junit.
- **Database Management:** MS SQL Server, MySQL, Database Design.
- **Frameworks and Tools:** Microsoft .NET, SpringBoot, JakartaEE, Git & GitHub, Postman, Jira.
- **Soft Skills:** Strong problem-solving skills, High presentation skills, attention to details, Analytical thinking, Ability to work independently and within a team on-site and remotely, Time management, High communication verbal and non-verbal communication skills, Innovative, Committed. Eagerness to learn, adaptability to new technologies and processes, Ability to prioritize and organize tasks effectively, Work independently and responsibly

Volunteering

Google Developer Student Clubs community Cairo University — *Instructor & Mentor* May 2024 – Present

Mentoring and guiding university students across various academic levels in technical topics. Delivering technical workshops, Online lectures, and helping students grow through hands-on learning and project-based experiences.

Competitions and Achievements

Egyptian Collegiate Programming Contest (ECPC)

August 2024, Alexandria, Egypt

Solved complex problems under strict time constraints, demonstrating advanced proficiency in data structures and algorithm design

Languages

- Arabic: Native
- English: Proficient