

Ahmed Hossam

Software Engineer

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👤 PROFILE

Software Engineer focused on building scalable and well-structured web applications using Java and Spring Boot. Experienced in developing e-commerce platforms and learning management systems with a strong emphasis on clean architecture, security, and performance. Thrives on solving complex problems, optimizing backend processes, and collaborating with teams to deliver robust software solutions. Seeking opportunities to apply and expand my skills in a dynamic development environment.

📁 PROJECTS

Online Learning Management System (OLMS) – Java, Spring Boot

- Enforced robust security with role-based access control, JWT authentication, and method-level security while centralizing error handling using Controller Advice.
- Designed a structured content management system by enabling instructors to create, update, and manage courses, videos, assignments, and quizzes, with AWS S3 integration for video storage.
- Implemented a modular architecture using DAO, DTO, and Mapper to separate concerns, optimize data transformation, and streamline database interactions.
- Optimized database and API performance by leveraging MySQL with soft deletes, implementing pagination, sorting, and query parameters, and designing HATEOAS-driven RESTful APIs.
- Engineered real-time features and notifications by building WebSocket-based chat and delivering real-time and email alerts for assignments, grades, and course availability.

E-Commerce Project - Java, Spring Boot

- Structured repository and service layers to improve data access, enforce business logic separation, and maintain clean architecture principles.
- Constructed a role-based access control with user-specific permissions, securing endpoints and ensuring compliance with authentication standards.
- Developed a robust product management system supporting CRUD operations, categorization, and real-time inventory tracking for seamless organization.
- Formulated an efficient order and cart system with real-time cart updates, automated order total calculations, and accurate shipping cost estimations.
- Enhanced data transformation and performance using MapStruct for entity-DTO conversion, reducing boilerplate code and optimizing data handling.

Java Based Game

- Developed a Java-based war game with a GUI built in Eclipse, featuring three nations, multiple troop types, and step based gameplay mechanics for time progression, including interactive war simulation features.

Graduation Project

- Designed and implemented a license plate recognition system embedded with a swing gate, leveraging machine learning and image processing techniques using Python-tesseract for optical character recognition (OCR).

EDUCATION

Bachelor Degree in Mechatronics Engineering,
German University in Cairo(GUC)

09/2019 – 09/2024

SKILLS

Programming Languages:

- Java, JavaScript, HTML, CSS ,jQuery

Frameworks:

- Spring Boot, Hibernate

Databases:

- MySQL, MSSQL

Tools:

- Git, AWS S3

Concepts:

- SOLID principles, Clean Architecture, OOP