Malak Essam

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github.com/malak-essam

Java Backend Developer

Passionate Java Backend Developer with a strong foundation in Spring Boot, focused on building robust and scalable backend systems from design to deployment. I am skilled in developing RESTful APIs, applying OOP, design patterns, and software engineering principles such as SOLID, DRY, and KISS to deliver clean, maintainable code. Experienced in refactoring legacy systems, database design, and microservices architecture. Dedicated to continuous learning and delivering high-quality, production-ready backend solutions.

Education

Cairo University

Sep 2018 – Jul 2022

B.S in Computer Science
Cairo, Egypt

EXPERIENCE

Freelance

Jul 2025 – Present

Programming Instructor
Egypt, Remote - Part-time
- Designed and delivered practical projects covering OOP, database fundamentals, and backend concepts

Cairo University – HCIA Internship

Jul 2025 – Sep 2025

Machine learning Instructor
Egypt, Hybrid - part-time
- Conducted applied ML sessions focused on data-driven problem solving and model development with Python.

Egyptian Army

Jun 2023 – Jun 2024

Full stack developer

- Maintained and enhanced existing web applications using HTML, CSS, JavaScript, and PHP.
- Implemented updates to improve performance, security, and code quality.
- Fixed bugs, optimized frontend responsiveness, and ensured consistent user experience.
- Applied general IT skills for troubleshooting, deployment, and version control management.

Skills

Backend Development: Java 21, Spring Boot, Spring MVC, Spring Data JPA, Spring Security, RESTful API Development, Microservices, WebSocket (STOMP/SockJS), JWT Authentication, Authentication & Authorization, Validation, PostgreSQL, SQL, Database Design, Maven, JUnit/Mockito, Integration & Unit Testing, SpringDoc/OpenAPI.
Architecture & Software Engineering: Object-Oriented Programming (OOP), Design Patterns, SOLID Principles, DRY, KISS, Clean Code, Microservices Architecture, API Documentation, Refactoring Legacy Systems, System Design Fundamentals.
Frontend: HTML, CSS, Tailwind CSS, JavaScript, TypeScript, React, Next.js
DevOps & Tools: Git, Docker, Linux, CI/CD Pipelines, Deployment.
Soft Skills: Problem-Solving, Communication, Team Collaboration, Teaching & Mentorship, Time Management, Adaptability, Leadership, Attention to Detail, Ownership & Responsibility.
Additional Technical Skills: Machine Learning, Data Analysis.

Projects

Real-Time Chat Application with Friend Management System– Full Stack Project
Full Stack Backend Developer
GitHub: backend | Frontend
- Engineered a high-performance full-stack chat application utilizing Next.js 16 and Spring Boot, enabling seamless real-time communication for users.
- Implemented a robust real-time messaging system using WebSocket (STOMP/SockJS), reducing message latency to under 100ms and supporting features like live typing indicators and online presence status.
- Developed a comprehensive friend management system, allowing users to search, request, accept, and block connections with instant UI updates.
- Secured user data and sessions by implementing Spring Security with JWT authentication, ensuring safe stateless authentication and protected API endpoints.
- Designed a modern, responsive user interface with Tailwind CSS 4, dark mode support, and smooth CSS animations for a premium user experience.

Tech Stack:
Java 21, Spring Boot, Spring Security, Spring Data JPA, JWT, PostgreSQL, Maven, SpringDoc, React/Next.js.

Todo List Application – Full Stack Project
Java Backend Developer
GitHub: backend | Frontend
- Built a RESTful Todo List API using Spring Boot with JWT authentication and Spring Security for user management and access control.
- Implemented CRUD operations for users, Todolists, and tasks using Spring Data JPA and PostgreSQL.
- Documented all endpoints with SpringDoc OpenAPI for easy API testing and integration.
- Integrated the backend with a vanilla JavaScript frontend that handles login, registration, and dynamic list/task management through Fetch API.
- Deployed and tested both components locally and on Railway for production-ready use.

Tech Stack:
Java 21, Spring Boot, Spring Security, Spring Data JPA, JWT, PostgreSQL, SpringDoc, HTML, CSS, JavaScript.

Certifications

Linux Essentials — *MaharaTech*
Completed: 2025

Database Fundamentals — *MaharaTech*
Completed: 2024

Additional Information

Arabic (Native), English (B2)

Completed military service in the Egyptian Armed Forces (2024), with appreciation as a good role model.