

# Ali Itawi - Back-End Engineer

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## SUMMARY

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Back-End Engineer with deep expertise in Java and the Spring Boot ecosystem, focused on building scalable, high-performance RESTful APIs and architecting clean, maintainable systems. Combines a strong academic foundation in Mathematics and Computer Science with advanced problem-solving skills in algorithms, data structures, and system design.

## EDUCATION

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### Al Maaref University

Bachelor of Science in Computer Science

Beirut, Airport Bridge

September 2022-Present

### Lebanese University

Bachelor of Science in Mathematics

Beirut, Rafic Hariri University Campus

September 2018- July 2022

## EXPERIENCE

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### 42 Beirut Core Program

May 2025 - Present

42 Beirut

Beirut

- Immersed in a rigorous, peer-driven curriculum focused on C programming, algorithms, memory management, and low-level system design.
- Completed the highly selective 42 Piscine—an intensive month-long bootcamp—demonstrating resilience, adaptability, and critical thinking.
- Collaborated on team-based projects to strengthen problem-solving, code review, and debugging skills in a no-teacher environment.
- Advanced through structured levels covering algorithms, system programming, Git mastery, and collaborative software development.

### Intern - Backend Engineer

August 2024 - November 2024

Internship with a Murex Software Engineer

Remote

- Contributed to a cutting-edge SaaS project by leveraging Express.js to build scalable and efficient backend services.
- Designed and implemented RESTful APIs, ensuring performance, maintainability, and adherence to clean architecture principles.
- Developed unit and integration tests using Jest, ensuring reliability and code quality.
- Optimized MongoDB interactions via Mongoose for efficient data access and persistence.
- Collaborated within Agile methodologies, contributing to sprint planning and timely delivery of milestones.
- Maintained API documentation using Swagger for streamlined integration and developer communication.

## PROJECTS

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### CodeForge: Automated Project Generator (In Progress) | *Spring Boot, Thymeleaf, DeepSeek, JPA, Junit*

- Developing a tool that automates project scaffolding by generating directories, classes, and configurations.
- Using Java scripting to dynamically create directories and classes for backend project structures based on user input.
- Generating frontend scaffolding dynamically based on the user's selected technology.
- Using DeepSeek API to automate the project generation process with intelligent code suggestions and optimized scaffolding.

### ChessMaster | *Core Java, Spring Boot, Swagger, Junit* | [chess.aliitawi.me](#)

- Developed a comprehensive, fully functional chess engine supporting all official rules.
- Implemented advanced move validation, game state management, and a modular design optimized for integration with Spring Boot applications.
- Focused on code efficiency and performance optimizations to ensure smooth execution and scalability.
- Implemented over 65 rigorous unit tests to validate complex game logic, ensuring high code reliability.

### **Redis URL Shortener** | *Spring Boot, Redis, Docker, Swagger, Lombok*

- Developed a high-performance URL shortener leveraging Redis for quick lookups and caching.
- Containerized the application with Docker for easy deployment and scalability.
- Integrated Swagger for API documentation and Lombok to simplify development.

### **LargestEmptySquare-DP** | *C, Dynamic Programming*

- Implemented a dynamic programming algorithm to find the largest empty square in a grid with obstacles.
- Efficiently identifies the largest empty area prioritizing the top-left square when multiple solutions exist.
- Demonstrates proficiency in low-level programming and memory management in C.

## EXTRACURRICULAR ACTIVITIES

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### **Al Maaref University Chess Team** | *2024*

- Assisted the university's chess team in securing a second-place position .

### **Al Maaref University Chess Team** | *2023*

- Helped lead the university's chess team to a second-place finish among all universities in Lebanon.

### **Al Maaref University Chess Competition** | *2022*

- Achieved First place among participants in the Chess University competition.

### **Lebanese University Chess Tournament** | *2019*

- Obtained third place in the Chess tournament held at the Lebanese University.

## TECHNICAL SKILLS

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**Languages:** Java, C/C++, Python, JavaScript/HTML/CSS, SQL, NoSQL

**Advanced Skills:** Object Oriented Programming, Data Structures, Algorithms, Solid Principles, Design Patterns

**Frameworks and Libraries:** Spring Boot, ExpressJS, MySQL, MongoDB, TensorFlow, Scikit-learn, PyTorch

**Developer Tools:** Git, Linux, Maven, Docker, VS Code, IntelliJ, Jupyter, Jira