

Ali RAHAL

SOFTWARE ENGINEER

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Motivated Computer & Communication Engineering student at Antonine University and 42 Beirut, with strong hands-on experience in systems programming, backend development, and problem-solving under rigorous project-based environments. I am passionate about building efficient, scalable software and continuously improving my technical depth through real-world challenges. Seeking an internship where I can contribute to impactful engineering projects, learn from experienced teams, and grow into a high-performance software engineer.

EDUCATION

Bachelor of Engineering in Computer and Communications (Master level) 2023-Present

- Software Engineering Specialization
- Emphasis on Systems Programming, Software Architecture, Backend Development, and AI-driven systems design
- GPA : 84/100

42-Beirut level 3 2025-Present

- 42 Core Curriculum - Architecture of Digital Technologies Program
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EXPERIENCE

Private Programming Tutor | C, C++, Java (Part-Time) 2024-Present

- Trained students in Data Structures, memory management, and object-oriented programming through hands-on coding sessions.
- Guided students in developing clean, modular, and testable code aligned with university and 42 standards.

Selected Projects

Minishell | C, Linux, System Calls

- Built a fully functional Unix shell in C, implementing command parsing, pipelines, redirections, and environment variable expansion similar to Bash.
- Engineered full shell execution flow in C by implementing process management (fork, execve, waitpid, pipes, file descriptor manipulation) alongside a custom lexer, parser, and execution engine, with robust signal handling and strict memory-safe resource management.

Herbal E-Commerce Platform | Node.js, Express, MySQL, HTML, CSS, JavaScript

- Developed a secure full-stack e-commerce system using Node.js, Express, and MySQL with structured layered architecture.
- Implemented RESTful APIs, authentication, and transactional workflows for product and order management.
- Built responsive frontend interfaces with HTML, CSS, and JavaScript, ensuring efficient data handling and dynamic UI updates.

TECHNICAL SKILLS

- **Programming Languages:** Python, Java, C, C++, JavaScript, TypeScript, SQL, MATLAB
- **Systems & Low-level:** Linux, Bash, System Calls, Memory Management
- **Networking:** TCP/IP, Network Fundamentals
- **Web & Backend:** Node.js, Express.js, HTML, CSS, RESTful APIs
- **Databases:** MongoDB, MySQL, MySQL Workbench, Microsoft SQL Server, Relational Database Design
- **Frameworks & Libraries:** JavaFX, NumPy, Pandas
- **Tools & Platforms:** Git, GitHub, VS Code

LANGUAGES

- English (Fluent) , Arabic (Native)