

Ahmad Abbas

Backend Software Engineer | Spring Boot • Laravel • REST APIs • Docker • Redis

+961 81 048 256 ahmadabs183@gmail.com www.linkedin.com/in/ahmad-abbass Lebanon, Beirut

SUMMARY

Backend Software Engineer pursuing a Master's in Internet of Things & Cybersecurity at the University of Lille. Experienced in designing and developing scalable backend applications using Java, Laravel, Spring Boot, REST APIs, Redis, Docker, and SQL databases. Strong background in distributed systems, networking, concurrency, and performance optimization.

EXPERIENCE

PHP Backend Developer Intern

Beirut, Lebanon

[Foo.mobi](#)

04/2024 – 09/2024

- Designed and developed RESTful APIs using Laravel and PHP.
- Optimized backend performance using Laravel Octane and Redis, achieving over **1800 requests/sec**.
- Implemented CI/CD pipelines reducing deployment time by **75%**.
- Built Docker-based development environments.
- Debugged production issues and improved application stability.
- Collaborated with frontend developers to integrate backend APIs.

ACADEMIC PROJECTS

Capstone Project – Team Collaboration Tool

Beirut, Lebanon

[Lebanese American University](#)

01/2025 - 06/2025

- Designed RESTful APIs for messaging, authentication, file sharing, and task management.
- Implemented Redis-powered real-time messaging using WebSockets.
- Developed secure JWT authentication with two-level RBAC.
- Containerized the application using Docker.

Multi-Threaded FTP Server & Client (Java)

Lille, France

[Université de Lille](#)

01/2026 - 03/2026

- Designed and implemented a fully functional FTP server following RFC 959 specifications.
- Implemented concurrent client handling using ExecutorService thread pools.
- Designed a Virtual File System (VFS) ensuring per-user isolation (chroot-like sandboxing).
- Developed a Java FTP client supporting full bidirectional file transfers.

JavaScript to x86-64 Compiler — Python, C, x86-64 Assembly

Lille, France

[Université de Lille](#)

01/2026 - 03/2026

- Implemented AST transformations, scope analysis, and lexical environment handling.
- Developed NaN-boxing value representation to encode numbers, booleans, strings, objects, and null in 64 bits.
- Generated optimized assembly with proper stack management, calling conventions, and label handling.
- Implemented closure support using lexical environment chaining.

Sound Processor — Rust

Lille, France

[Université de Lille](#)

01/2026 - 03/2026

- Developed a high-performance real-time audio processor in Rust using ownership and zero-cost abstractions for memory safety and performance.
- Implemented a modular digital signal processing (DSP) pipeline supporting **FFT-based frequency analysis**, audio filtering, dynamic effects, and real-time WAV audio processing.
- Designed a multithreaded processing architecture to separate audio I/O, signal processing, and user interactions, ensuring low-latency playback and smooth execution.
- Implemented audio encoding/decoding using Symphonia and CPAL, and comprehensive error handling for reliable processing of diverse audio files.
- Developed extensive unit and integration tests to validate DSP algorithms, audio correctness, and system reliability under concurrent workloads.

Blockchain Platform — Java

Lille, France

[Université de Lille](#)

01/2025 - 04/2025

- Developed a blockchain platform in Java implementing Proof-of-Work consensus, UTXO-based transactions, and wallet management.
- Designed RESTful APIs for wallet creation, balance queries, transaction submission, and blockchain inspection.
- Integrated MongoDB for persistent storage of blocks, transactions, and UTXOs.
- Implemented transaction validation, digital signatures, mining rewards, and block verification to ensure ledger integrity.
- Applied object-oriented design principles to create a modular and extensible blockchain architecture.

SKILLS

Backend: Spring Boot, Laravel, Django, REST APIs, JWT, Redis, MySQL

Languages: Java, Python, Rust, PHP, C, C++, JavaScript

Databases: MySQL, MongoDB, PostgreSQL

DevOps: Docker, Git, CI/CD, Linux

Tools: Postman, FileZilla, VS Code

EDUCATION

Master's Student in Internet of Things & Cybersecurity

Lille, France

[Université de Lille](#)

09/2025 - 09/2027

Bachelor of Science in Computer Science

Beirut, Lebanon

[Lebanese American University](#)

09/2021 - 05/2025

LANGUAGES

Arabic — Native

English — C1

French — B1