Hamza Ouadia

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Location: Mohammedia, Morocco

Summary

Software developer with expertise in system programming, web development, and networking. Built and deployed real-time applications, including a WebSocket-based chat system and a custom HTTP server. A 42 (1337) graduate with a strong foundation in problem-solving, performance optimization, and scalable software solutions. Seeking an opportunity to apply my skills in a challenging environment.

Technical Skills

- **Programming Languages**: C, C++, Python, JavaScript, PHP

- **Web Development**: Django, React (JSX & CSS), Tailwind CSS, Node.js

- **Databases**: MariaDB, MySQL, PostgreSQL

- **Networking & System Administration**: Linux, Docker, Nginx, Redis

- **Development Tools**: Git, Bash, WebSocket

Education

42 (1337 School)
Oct 2022 - 2025
Completed the final project by developing a scalable and secure web application, demonstrating expertise in system programming, algorithms, and software development best practices.

Notable Projects

Core Projects at 42 (1337):

- *WebServe* – Built a lightweight HTTP server, implementing socket programming and concurrency management.

- *MiniShell* – Developed a UNIX shell supporting pipes, redirections, and command execution via system calls.

- *Philosophers* – Solved the classical dining philosophers' problem using multithreading and synchronization.

- *Push_swap* – Designed an optimized sorting algorithm with minimal operations for stack manipulation.

- *Cub3D* – Built a raycasting-based 3D game engine inspired by Wolfenstein 3D.

- *Inception* – Designed a fully containerized infrastructure using Docker Compose, featuring Nginx, WordPress, and MariaDB.

- *Fract-ol* – Implemented fractal rendering using C and the MiniLibX graphics library.

- *Minitalk* – Built an inter-process communication system using UNIX signals.

- *Born2beroot* – Configured a secure Linux server with system administration best practices.

- *NetPractice* – Completed advanced networking exercises on subnetting and network infrastructure.

- *CPP Modules (00-09)* – Mastered C++ object-oriented programming, including polymorphism, templates, and STL.

ft_transcendence:

 – Developed a full-stack web application

Real-time Chat Application

- Built a real-time chat platform using Django Channels, WebSockets, JWT authentication, and Redis.
- Deployed using Docker and Nginx, optimizing backend performance.

Two-Player Pong Game
- Developed a multiplayer Pong game using Django Channels and vanilla JavaScript.
- Integrated WebSockets for real-time gameplay.

Personal Project

Portfolio Website
- Designed a personal portfolio website using React, Tailwind CSS, and Three.js.
- Implemented smooth animations, responsive design, and fast deployment on Vercel/GitHub Pages.

Certifications & Achievements

- Completed 42's final project, showcasing software architecture, scalability, and problem-solving expertise.

Languages

- English: Fluent

- French: intermediate

- Arabic: Native

Interests

Passionate about web development, security, backend systems, and scalable architecture.