

Ayoub Bougatia

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PROFESSIONAL SUMMARY

1337 Coding School (42 Network) student and Industrial Digitalization graduate with hands-on experience in C/C++ systems programming, non-blocking networking, containerized deployments, and infrastructure security. Seeking a 2027 PFE internship in Software Engineering / DevOps.

TECHNICAL SKILLS

Programming: C, C++98, Bash / Shell; familiarity with Python and SQL

DevOps & Security: Linux, Docker, Docker Compose, NGINX, HTTPS/TLS, HashiCorp Vault (AppRole), Git

Systems & Networking: TCP/IP, POSIX sockets, `poll()`, multithreading, mutexes, GDB, Valgrind

Platform Operations: PostgreSQL service integration and backups, reverse proxying, service health checks

SELECTED TECHNICAL PROJECTS

ft_transcendence – Real-Time Web Platform Docker, NGINX, Vault, PostgreSQL

DevOps & Security Lead / 5-person team 2026

- Owned infrastructure and security integration for a team-built web application; deployed frontend, FastAPI backend, PostgreSQL, NGINX, and Vault using Docker Compose.

- Configured HTTPS reverse proxying and Vault AppRole secret access with least-privilege policies; validated database connectivity, service readiness, and PostgreSQL backup integrity.

ft_irc – IRC Network Server C++98, TCP/IP, POSIX sockets

Networking & Server Foundation / 3-person team 2026

- Implemented the TCP server networking layer in C++98, including socket setup (`socket`, `bind`, `listen`, `accept`) and client connection management.

- Built non-blocking I/O multiplexing with `poll()` to handle concurrent client reads, writes, and disconnects within an event-driven server.

Inception – Containerized Service Infrastructure Docker, Compose, Debian, TLS

Infrastructure Project 2026

- Built a multi-container environment for NGINX, WordPress/PHP-FPM, and MariaDB using custom Dockerfiles, internal networking, and persistent volumes.

- Configured TLS termination and container restart behavior; tested communication between services and persistence across restarts.

Minishell & Philosophers – UNIX Systems Programming C, POSIX, pthreads

Minishell: 2-person team / Philosophers: individual 2025

- Co-developed a UNIX-like shell supporting pipelines, redirections, environment expansion, and signal handling.

- Used threads and mutexes to coordinate shared resources in a dining-philosophers concurrency simulation.

PROFESSIONAL EXPERIENCE

OCP Group – Mining Production Ben Guerir, Morocco

Industrial Digitalization Intern (Licence Professionnelle PFE) Apr – Jun 2025

- Analyzed operating processes, sensor instrumentation, and safety constraints for the proposed automation of an industrial stacker-reclaimer machine.

- Designed a proposed machine-to-control-room network architecture and prepared technical specifications and a techno-economic feasibility study.

EDUCATION

1337 Coding School (42 Network / UM6P) Ben Guerir, Morocco

Software Engineering – Common Core Completed 2024 – Present

Green Tech Institute (UM6P) Ben Guerir, Morocco

Licence Professionnelle – Industrial Operations & Digitalization 2022 – 2025

LANGUAGES & LEADERSHIP

Languages: English (IELTS C1), French (DELF B2), Arabic (Native)

Leadership: Events Manager, Digital Innovation & Technology Club (UM6P)