

Technical Summary

Computer Engineering student specializing in IoT and Cybersecurity. Linux system administration, infrastructure as code, self-hosted environments built with Nix on NixOS, including a home lab that runs its own models locally. Looking for an internship in systems administration or cybersecurity, 10 weeks to 4 months, available anywhere between 19 April and 31 August 2027.

Education

- 2023 to 2028M.Eng. in Internet of Things and Cybersecurity, École Polytechnique Universitaire de Lille (Polytech Lille), Villeneuve d'Ascq, France
- 2023 to 2025Preparatory Cycle (MPCSI), Polytech Lille, Villeneuve d'Ascq, France
Graduated with Highest Honors, Top of Class 2023/2024
- 2023Baccalauréat (French high school diploma), France
Très Bien (Highest Distinction)

Technical Skills

- Systems & infra.Linux (NixOS, Debian, Arch, Ubuntu), KVM/QEMU, Docker, microVMs, systemd.
- Declarative config.Nix/NixOS, sops, reproducible builds, environment management.
- Local AIllama.cpp, vLLM.
- Networking & SecurityTailscale, ZeroTier, IAM isolation, AWS (EC2, IAM, security groups), CTF (Reverse Engineering, Web/Memory Safety).
- ProgrammingPython, C/C++, C#, Java, Rust, Bash, PostgreSQL, Assembly (AVR/ARM).
- ToolsGit, KiCad, MATLAB/Simulink, Matplotlib.
- LanguagesEnglish (C1), Arabic (C2), French (C1), German (B2).

Selected Projects

- Since Aug 2026Local LLM Inference on Consumer Hardware
 - Open-weight models on three machines with llama.cpp, running inference on GPU and on CPU only, reachable only through a VPS.
 - A 125B mixture-of-experts model on a 12 GB card: experts split across VRAM, RAM and a 29 GB SSD lookup table. 49 tok/s decode and 997 tok/s prefill.
- Since Jan 2026Self-Hosted Linux Server Infrastructure
 - Headless server: Nextcloud, Jellyfin, SearXNG and Samba. Started on Debian in January 2026, rebuilt on NixOS in February from one shared config tree.
 - Nothing listens on the public internet: services are reachable only through a VPS, and the repository secrets are encrypted with sops.
- Jan to Jun 2026Split Ergonomic Keyboard (coursework)
Schematic and two-layer PCB drawn in KiCad, firmware written in C.

Professional Experience

- Jun to Jul 2026Research Internship, CRIStAL (2XS team), IRCICA • Université de Lille, Lille, France
 - Removed every fork and exec of iw and ip in the wifi module of a Linux IoT-detection probe, replacing them with direct nl80211 and rtnetlink calls and automatic interface discovery.
 - Contributed to the 2XS team's embedded work on memory footprint, energy efficiency and security, and to kernel debugging.
- Apr 2025 to nowFabmanager (Fabricarium FabLab), Polytech Lille, Villeneuve d'Ascq, France
 - Operate and maintain the school's FabLab: 3D printers, laser cutters, CNC, electronics workstations.
 - Support students and researchers prototyping hardware and IoT projects; coordinate bookings, safety and open sessions.
- Jul to Aug 2023Internship in Automation Engineering (Valeo), Valeo, Tunis, Tunisia
 - Automated a sound-recognition quality check on a steering-wheel line with Python and Librosa.