

Okba Allaoua

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SUMMARY

Software Engineer with 3+ years of experience spanning Cybersecurity, DevSecOps, Cloud Computing, and Networking. I design and build functional, interactive systems across diverse tech stacks, turning complex problems into reliable, elegant solutions. Currently in my final year at the University of Montpellier, seeking an internship to apply this expertise to real-world engineering challenges.

EDUCATION

University of Montpellier

Master's Degree in Computer Software Engineering

Montpellier, France

Sep. 2026 – Sept. 2027

Higher National School of Computer Science (ESI)

Master's & State Engineer's Degrees in Infrastructure & Computer Systems Engineering

Algiers, Algeria

Sep. 2021 – Juin. 2026

EXPERIENCE

Software Engineer

LIRMM/CNRS

Oct. 2025 – Jun. 2026

Montpellier, France

- Led the functional evolution of *Smart City Proximity* as part of my final year thesis (PFE) at ESI, delivering 14 microservices behind an API gateway and 4 Flutter apps with multi-gateway payments, flash deals, notifications, subscriptions, and BI integration.
- Drove a full quality audit and refactor to SonarCloud A-grade (ISO/IEC 25010), optimizing DB queries (p95 latency down 9.4s to 280ms) and achieving 95.5% test coverage across 3,618+ Jest tests.
- Architected infrastructure across two VPS with dev-prod parity: umbrella-orchestrated CI/CD, Ansible-hardened provisioning, and a Kubernetes cluster with HPA auto-scaling and zero-downtime rollouts.
- Built a three-pillar observability stack across 5 Grafana dashboards, validated via k6 load, spike, and soak testing, delivering a live documented research case study for LIRMM/CNRS.

Stack: Node.js, MongoDB, Docker, Kubernetes, Ansible, GitHub Actions, Prometheus, Grafana, Loki, OpenTelemetry, k6, Flutter, SonarCloud

Software Engineer

DeepLyfe.inc

Feb. 2025 – Feb. 2026

Algiers, Algeria

- Developed *DeepLyfe Tracking*, a nationwide information system for logistics and multi-store tracking.
- Built *DeepLyfe CMS*, a content management system serving Algerian companies across multiple industries.

Stack: Next.js, React, ShadeCN, Laravel, PHP, PostgreSQL, Github Actions, Apache

Full Stack Developer

EarthMeta.ai

Jul. 2023 – Sep. 2024

Hong Kong. SAR

- Migrated *EarthMeta*, a decentralized metaverse web app, from Vue 2 to Vue 3 (Composition API), and built its map exploration, city, profile, rewards, and marketplace UI.
- Integrated smart contract and vault interactions, wallet connection, signature, and transaction-approval flows, plus WalletConnect-based NFT minting.
- Built Mapbox GL-based geospatial visualization with custom markers and themes for interactive city and map exploration.
- Resolved critical presale bugs and modernized dependencies, ensuring reliable token purchases and transactions in production.

Stack: Vue.js, Nuxt.js, Pinia, TailwindCSS, Laravel, Mapbox GL, ethers.js, wagmi, WalletConnect, Blockchain, Bitbucket

Full Stack Developer

SwissDigiLab

Mar. 2023 – Feb. 2025

Geneva, Switzerland

- Developed *ZenBooking*, a multi-actor booking and appointments platform for businesses, hosters, and clients, across web, mobile, and backend.
- Built and maintained *Outrun Rental*, a vehicle rental platform, covering client, admin, landing site, and mobile, across original and rebranded versions.
- Led a crew building *Grrreat*, a full-stack ordering system for a Swiss burger chain.
- Handled deployment and infrastructure across projects: GitLab CI/CD, runner management, SSL issuance, and server configuration.

Stack: Next.js, React, React Native, Django, PostgreSQL, GitLab CI, Nginx

TECHNICAL SKILLS

- **Languages:** Java, Python, JavaScript, TypeScript, PHP, C, Pascal, SQL, R, Rust, Ruby.
- **Web:** React.js, Vue.js, Next.js, Nuxt.js, Node.js/Express.js, Django, Flask, FastAPI, Laravel, GraphQL, gRPC, tRPC, TailwindCSS, Bootstrap, Material UI, ChakraUI, Redux, Zustand, Vuex, Pinia.
- **Mobile:** Flutter, React Native, Expo.
- **Databases:** MongoDB, PostgreSQL, MySQL, SQLite, Redis, Firebase, Prisma.
- **DevOps:** Linux, Docker, Kubernetes, Ansible, Terraform, Traefik, Nginx, Apache, GCP, AWS, Jenkins, Kafka, GitHub Actions, GitLab CI, Shell Scripting.
- **Observability:** Prometheus, Grafana, Loki, Tempo, OpenTelemetry, Elasticsearch, SonarCloud, Burp Suite, Cryptography, OSINT.
- **Tools:** Git, GitHub, GitLab, Bitbucket, Postman, Figma, Jira, Trello, Slack, ClickUp, VS Code, Storybook, UML, C4.

SOFT SKILLS

- Agile methodologies (Scrum), project management, leadership.
- Problem-solving, attention to detail, curiosity.
- Excellent written and verbal communication skills.

PROJECTS

CogniFile.ai: An AI-powered cloud storage platform with Next.js, FastAPI, and Firebase. Deployed on GCP with Docker.

PaperHub: An article search engine with Django, Elasticsearch, and Next.js.

HMS: A microservices-based hotel management platform with Django, Node.js, and Next.js. Deployed on Azure.

Bird Species Recognition: A CNN-based bird species classifier (96% accuracy) with TensorFlow and Streamlit.

5G Core Network Simulation: A simulated 5G core network with Free5GC, NS-3, and Prometheus/Grafana monitoring.

VOLUNTEERING & CLUBS

Club Scientifique de l'ESI (CSE): Webmaster, leading web development and managing the club's infrastructure and deployments.

Google Developers Group Algiers (GDG): Open Source Team Lead, coordinating contributors, creating open source packages and mentoring on GitHub best practices.

Ingeniums Club: Learning Community Lead & Board Member, managing a 40+ member department and organizing tech talks and mentorship programs.

LANGUAGES

French: Fluent | **English:** Fluent | **Arabic:** Native

CERTIFICATIONS

Google Associate Cloud Engineer

Google Cybersecurity Professional