

Mohamed Amine Benkhoud

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PROFESSIONAL SUMMARY

Results-driven Software Engineer specialising in Mobile Development, Cloud Computing, IoT, and Artificial Intelligence. Experienced in designing and delivering scalable cross-platform applications, cloud-connected systems, and end-to-end digital solutions using Flutter, Kotlin Multiplatform, NestJS, AWS, Firebase, and modern DevOps practices. Proven ability to transform complex ideas into reliable products, demonstrated through multiple successful internships, national hackathon awards, and real-world deployments.

PROFESSIONAL EXPERIENCE

KMP Mobile Developer Intern

February 2026 – June 2026

Kartag

Germany – Remote

- Designed and developed a production-ready cross-platform mobile application using Kotlin Multiplatform, sharing business logic across Android and iOS platforms.
- Implemented route management, offline-first data collection, local persistence, synchronisation mechanisms, and BLE communication with external hardware devices.
- Built and optimised platform-specific user interfaces while ensuring consistency, performance, and maintainability across both platforms.
- Conducted functional testing, debugging, and technical documentation to support product scalability and future development.

Full-Stack Developer Intern

July 2025 – October 2025

Orange Developer Center

Tunisia

- Developed a complete IoT ecosystem consisting of a Flutter mobile application, NestJS backend, and MongoDB database architecture.
- Implemented secure authentication and role-based access control using JWT; integrated AWS IoT Core, Amazon S3, and Amazon ECR for cloud connectivity and device management.
- Designed and developed ESP32-based IoT devices communicating with cloud services through MQTT protocols.
- Delivered an end-to-end solution connecting embedded hardware, cloud infrastructure, backend services, and mobile applications.

Mobile Developer Intern

June 2025

Lebjawi Tech

Mauritania – Remote

- Developed scalable Flutter applications using MVVM Clean Architecture, Bloc, and Riverpod state management.
- Converted Figma designs into responsive and pixel-perfect mobile interfaces across multiple device sizes.
- Participated in agile development workflows, code reviews, and feature implementation cycles.

Full-Stack Developer Volunteer

November 2024 – May 2025

Tunisian Red Crescent – Gabes Committee

Tunisia

- Designed and developed a community management platform using Flutter, Node.js, and JWT-based authentication; integrated Google Maps for real-time volunteer coordination.
- Architected a hybrid database infrastructure using MySQL and MongoDB; deployed and maintained the platform at scale.
- Platform supported over 600 users, 1,500+ processed forms, and 86,000+ recorded events.

PROJECTS

Oasis Scanner – AI-Powered Oasis Monitoring Platform

1st Place, Smart Oasis Hackathon 2024

- Developed an intelligent monitoring platform for detecting illegal constructions within protected oasis regions using satellite imagery and Convolutional Neural Networks (CNN).
- Designed image-processing pipelines for automated anomaly detection and integrated Google Maps visualisation for real-time reporting.
- Built a complete management interface using PyQt5 and the MERN Stack.
- *Technologies: PyQt5, MERN Stack, CNN, Satellite Image Processing, Google Maps API*

WasteOff – AI Food Waste Management System

2nd Place, Hack4Food Hackathon 2025

- Developed a Flutter mobile application capable of detecting and quantifying food waste using computer vision techniques.
- Designed a real-time bidding system allowing compost companies to purchase collected organic waste, promoting circular economy practices.
- *Technologies: Flutter, TensorFlow, Express.js*

AgriHub – AI-Powered Agricultural Platform

- Built a collaborative platform connecting farmers and agricultural experts, with an AI assistant for guidance and a CNN-based plant disease detection system.
- Implemented social networking features to encourage knowledge sharing within the farming community.
- *Technologies: Angular, Spring Boot, PostgreSQL, Docker*

AI-Based Predictive Maintenance Application

- Developed a Flutter application predicting industrial equipment failures from machine audio recordings via Mel Spectrogram features and on-device TensorFlow Lite inference.
- Improved maintenance decision-making by automatically identifying recurring anomaly patterns.
- *Technologies: Flutter, TensorFlow Lite, FFmpeg, Flutter Sound*

EDUCATION

Bachelor of Science in Computer Science

2023 – 2026

Higher Institute of Computer Science and Multimedia of Gabes (ISIMG)

Gabes, Tunisia

- Completed first academic year at ISIMed before continuing studies at ISIMG.
- Final Grade: 19.5 / 20 .

TECHNICAL SKILLS

Mobile Development: Flutter, Kotlin Multiplatform (KMP), Dart

Backend Development: NestJS, Node.js, Django, Spring Boot

Cloud & DevOps: AWS (IoT Core, S3, ECR), Docker, GitHub Actions, CI/CD Pipelines

Databases: PostgreSQL, MongoDB, MySQL, Firebase, Supabase, Hive

IoT & Embedded Systems: ESP32, MQTT, BLE, Arduino, PlatformIO

Artificial Intelligence: TensorFlow, TensorFlow Lite, CNN, Computer Vision

Programming Languages: Dart, JavaScript, Python, SQL, C/C++

UI/UX Design: Figma, Adobe Photoshop

ACHIEVEMENTS & ACTIVITIES

- **1st Place** – Smart Oasis Hackathon 2024 (national competition)
- **1st Place** – X-Days Hackathon 2024
- **2nd Place** – Hack4Food Hackathon 2025
- **International Internship** – Kartag, Germany (remote)
- **Informatics & Robotics Trainer** – AJST (youth technology education)
- **Active Volunteer & First Aider** – Tunisian Red Crescent

LANGUAGES

Arabic: Native

English: B2 (Upper-Intermediate)

French: B1 (Intermediate)