

Saadia Dahrane

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Education

Master's Degree in Networks and Distributed Information Systems Université des Sciences et de la Technologie d'Oran (USTO) 2023 – 2025

Thesis: Design and Implementation of an IoT Smart Poultry Farm Platform based on Microservices and Machine Learning.

Bachelor's Degree in Computer Science

Université des Sciences et de la Technologie d'Oran (USTO) 2020 – 2023

Technical Skills

- **Programming:** C/C++,XML, Python, Java, Dart (Flutter), JavaScript)
- **Platforms:**Android Studio, MySQL , PostgreSQL, ESP32,VScode, Arduino IDE, Firebase Realtime Database, Cloud Functions.
- **Tools**
Frameworks: React,Flutter,django, Firebase, Git/GitHub, LaTeX
- **Other:** Microservices Architecture, Machine Learning, Mobile App Development,Web Développement , Push Notifications

Projects

IoT Smart Poultry Farm Platform (Master Thesis)

Designed and implemented a smart poultry farming solution integrating ESP32, DHT11 sensor, soil moisture sensor, ultrasonic food-level detection, servo-controlled feeders, automated/manual irrigation, and fan control. Connected to Firebase for real-time monitoring and mobile app control. Integrated anomaly detection and disease detection module using image-based machine learning.

Mobile App for Smart Poultry Farm (Flutter + Firebase)

Developed a cross-platform mobile app for monitoring and controlling poultry farm devices. Implemented local notifications, real-time database updates, and multi-language (French/Arabic) support.

Incident Management Platform (Django + PostgreSQL)

Developed a web and mobile application for industrial incident management. Designed and implemented the database architecture, backend services with Django, and integration with PostgreSQL for reliability and scalability.

Online Education Platform (Personal Startup Project)

Designed the concept of an Algerian platform to provide additional courses for students remotely. Worked on the teacher-student interaction model and integration of multi-language support in Flutter apps.

Waste Management Application (Java + Firebase)

Contributed to the development of a mobile for waste management. Focused on backend logic, database design, and integration with frontend interfaces to optimize collection and monitoring processes.

Smart Irrigation System (IoT + Firebase)

Implemented an automated irrigation system using ESP32 and soil moisture sensors. Designed a control system with manual and automatic modes connected to Firebase for remote monitoring, water-saving optimization, and real-time alerts.

Experience

Backend Developer – APSEC Startup

07/2024 – 09/2024

Worked as a backend developer using Django, contributing to web application development, API design, and database integration. **Academic and Personal Projects in IoT**

Mobile Development 2020 – Present

Hands-on experience in IoT prototyping, Firebase cloud integration, mobile app development, and distributed system design through academic research and self-driven projects.

Languages

French (Intermediate) | Arabic (Native) | English (Intermediate)