

# Saadia Dahrane

saadia.dahrane12@gmail.com | +213656529515 | Oran, Algeria  
github | linkedin| Portfolio link

## Education

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**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

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- **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 Developpement , Push Notifications

## Projects

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### **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.

### **Ecommerce web app (django + react + POSTGRESQL)**

Architected and implemented a full-stack e-commerce platform focused on bags, leveraging React for the frontend, Django REST API for backend services, and PostgreSQL for secure and scalable data management.

## **Experience**

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### **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**

2022 – 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**

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