

# KAMAL EDDINE BOULENACHE

## ciriculum vitae



### INFORMATION

+213792555786

Ave de l'ALN ,Ghardaia

Kamalboulenache@gmail.com

[Kamaleddine BOULENACHE](#)

[KamaleddineBLE](#)

### DEV SKILLS

- Python, C/C++, JavaScript
- C/C++ & Embedded Systems
- Web front frameworks
- TensorFlow, PyTorch, Scikit-learn
- NLP, Computer Vision, YOLO
- Data Preprocessing & EDA
- MQTT, LoRa, WebSocket
- Embedded Systems (ESP32, Arduino)
- Nodejs ,SQL, MongoDB
- Git, Docker
- Basic Circuit Design (Kicad)
- UI/UX Design

### SOFT SKILLS

- Problem-Solving & Critical Thinking
- Creativity & Innovation
- Attention to Detail
- Adaptability & Fast Learning
- Collaboration & Teamwork
- Project Management
- Entrepreneurial Mindset

### LANGUAGES

English(Fluent)

Arabic(Fluent)

French(Intermediate)

Amazigh(Native)

### PROFILE

AI and Data Science engineer with a strong passion and deep interest in IoT and embedded systems. Specializes in artificial intelligence while focusing on its integration with IoT to develop adaptive, data-driven, and scalable smart solutions. Experienced in projects such as AI-powered greenhouse management systems and custom smart devices, with a vision to combine advanced analytics and connected technologies to address real-world challenges.

### EDUCATION

- BAC Mathematics Speciality** (16.40/20) (SEP 2020)  
Lycée Ramdane Hamoude ,Ghardaia ,Algeria
- Ai & DS State Engineer Degree** (NOV 2020- JULY 2025)  
Ecole Supérieure en Sciences et Technologies de l'Informatique et du Numérique (ESTIN) Béjaïa, Algeria  
**Grade:** 19/20 (highest honor)  
**Thesis:** Design and Implementation of a Data Acquisition System for Monitoring and Controlling Soil and Environmental Parameters in a Smart Greenhouse
- Ai & DS Master's Degree** (July 2025)  
Ecole Supérieure en Sciences et Technologies de l'Informatique et du Numérique (ESTIN) Béjaïa, Algeria  
**Grade:** 17/20 (high distinction)  
**Thesis:** Artificial Intelligence and IoT in Smart Greenhouses: State-of-the-Art Review, Monitoring, Control, and Predictive Analysis

### EXPERIENCE

- IT intern** (Aug-Sep 2024)  
La Caisse Nationale de Sécurité Sociale des Non-Salariés
- Mobile & Web Dev Freelancer** (2020-Pesent)  
Fiverr , upwork
- lot Freelance project** (2020-Pesent)  
Fire alert system based on lora communication

### CERTIFICATES

- Python for Data Science, AI & Development** March 24, 2024  
[IBM](#),Coursera
- Architecting Smart IoT Devices** August 31, 2024  
[EIT Digital](#),Coursera
- Introduction to Embedded Machine Learning** August 28, 2024  
[Edge Impulse](#)Coursera

### PROJECTS & RESEARCH [More Details in this link](#)

- Grassthink** AI-Powered Smart Greenhouse Platform  
Built an AI-powered greenhouse system with real-time monitoring, automated control, and plant health analysis using YOLOv11.
- LoRa-Based Wildfire Detection and Monitoring System**  
Developed a wildfire detection network using three Heltec WiFi LoRa 32 modules to monitor temperature, humidity, and smoke. Used LoRa for long-range, low-power data transmission to a central web server with a real-time dashboard for sensor data, location tracking, and alerts.
- Smart Garage Controller**  
Developed an IoT garage system with door monitoring, remote control, and planing to add GPS-based geofencing for automated access.
- Smart Fingerprint Lock**  
reated a secure ESP32-based lock system with fingerprint authentication, relay control, and local storage for authorized user data.
- Aurex** IoT & AI Solutions Platform (Founder & Visionary)  
Vision to build a platform that transforms in-house IoT and AI innovations into production-ready products while providing tailored IoT development services. Aurex focuses on smart agriculture, home automation, and embedded AI, uniting hardware, software, and AI to deliver intelligent, scalable solutions.

### Activities

- Mentoring in IoT Events** (2023-2025)  
Guided participants in hands-on workshops and project showcases focused on IoT innovation. (2023–2024)  
[Link to TV report](#)
- Presetning Grassthink at COSI'2025** (JUN 2025)  
Showcased an IoT- and AI-powered smart greenhouse system to global researchers, industry leaders, and innovators. (Jan 2025)
- Active Club Engagement** (2020-2025)  
Participated in technical clubs and competitions to develop leadership, collaboration, and problem solving skills. (2022–2025)