





BOUSSELMI BESSEM

Consumer Electronics Innovator | IT Manager | AI & IoT Expert | Senior Embedded Systems Developer

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PROFESSIONAL SUMMARY

Passionate embedded systems developer with a strong background in consumer electronics, IoT. Over **8 years of experience** in designing and developing **cutting-edge products**, from concept to market. Proven leadership in **team management, system integration, and AI-driven embedded applications**.

EXPERIENCE

Tech Leader / Manager R&D Team – NOKIA (Consultant via Capgemini)
Jan 2025 – Present (Tunisia / Hungary)

- Led an **R&D team of 16 developers & testers**, improving software reliability for GSM-R, 5G, and 4G network elements.
- Designed and developed **high-performance embedded software**,
- Ensured timely project delivery by coordinating across multiple teams and improving development workflows.

Technologies: Team Leadership, Team Management, Delivery, Linux, C, C++, GSM-R, 5G, 4G, BTS, BSC, MSS, Troubleshooting

Embedded Team Leader – BMW Group (Consultant via Capgemini)
Jan 2024 – Jan 2025 (Tunisia / Germany)

- Member of management team for Infotainment project (more than 4000 developer and testers)
- Spearheaded the **Linux & Android Integration for Infotainment project**
- Head **Yocto Build & Release Team**
- Led **Configuration Control Board (CCB) meetings , Weekly Integration Planning**
- Collaborated with cross-functional teams from leading global companies such as **Samsung, Google, and Apple** to ensure seamless integration and alignment within BMW's infotainment software development.

Technologies: Management, Yocto, Embedded Linux, Python, CI/CD, Android, Infotainment Systems

Senior AI Embedded Engineer – Tuito
(France)

Nov 2022 – Dec 2023

- Developed **custom Linux images** for AI applications using **Yocto Project**.
- Integrated **AI models** for real-time **sensor data processing**.
- Optimized neural network models for **offline voice recognition** and **IoT devices**.

Technologies: Yocto, TensorFlow Lite, ONNX, C/C++, Embedded Linux, Docker

Senior Embedded Software Engineer – GÉOTHENTIC
(Canada , Quebec)

Aug 2021 – June 2022

- Designed a **bootloader for NXP i.MX RT Processors**.
- Developed a **cross-compilation pipeline** for ARM-based embedded systems.
- Implemented **ISO26262-compliant** automotive solutions.

Technologies: AutoSAR, RTOS MQX, Python, IoT, CAN Bus, Jenkins, PostgreSQL

Product Leader – GENICAL
(Tunisia)

May 2019 – Aug 2021

- Led the development of a **consumer IoT product**, overseeing hardware & firmware.
- Coordinated **mechanical, electronics, and software teams**.
- Managed **factory selection and manufacturing processes**.

Technologies: Product Design, IT Solution, Zephyr OS, C, Altium, SolidWorks, MQTT, IoT Security

R&D Team Leader – LOLIPOP | GENICAL

- Led a **6-member team** focused on IoT, and embedded product development.
- Designed **prototypes and selected hardware components**.
- Developed **custom firmware & software solutions**.

Technologies: Product Design, C, C++, Hardware Design, 3D Printing, MVP Development, IoT Prototyping, Team Management

Embedded Software Engineer – LOGAWIN

Jun 2017 - Aug 2018

(Tunisia)

- Developing systems and applications for “CKSQUARE” company specialized in automated exchange

Technologies: C, C++ , Embedded Linux, Git, Jira , Confluence

PROJECT HIGHLIGHT: FAKROUNA

Fakrouna: AI-Powered Sea Turtle Tracking System

Global Recognition & Media Coverage

- Featured in **international newspapers and global news channels**, showcasing its impact on marine conservation.
- Recognized as a **pioneering AI-driven wildlife tracking system** with significant contributions to environmental research.

In collaboration with the University of Sfax for Sciences

- Designed a **satellite monitoring device** for tracking endangered sea turtles in the Mediterranean.
- Developed **AI-based data analysis** to study migration patterns and behavior.
- Integrated **GSM, GPS, and LoRa Satellite Communication** for real-time tracking.
- Created a **user dashboard** for researchers and conservationists.

Technologies: STM32 Cortex-M0, AI, Data Mining, IoT, LORAWAN Satellite /GSM/GPS

Linklove: Smart Friendship Lamps (www.linklove.tn)

- Led the development of **Linklove**, an IoT product that enables people to stay connected via touch-activated lamps.
- Managed **hardware, firmware, and cloud integration**, ensuring seamless connectivity and real-time updates.
- Designed the product architecture and coordinated with manufacturing partners for **mass production**.
- Oversaw **marketing, pricing strategy, and commercial launch**, driving sales and brand awareness.
- Successfully brought **Linklove to market**, making it available for global consumers.

Technologies: ESP32, IoT, WiFi/BLE, Embedded C++, Cloud Connectivity, Product Marketing

EDUCATION

Private Higher School of Engineering and Technology

Degree: Computer Engineering – Mobile Embedded Systems & Software

TECHNICAL SKILLS

- **Software Development :** C#,VB.NET,Rust, QT, GTK+, Nodejs, PHP, Symfony, Flutter,SQL
 - **Embedded & IoT:** C, C++, Python, Bash, RTOS, Yocto, OpenWrt, Buildroot, POSIX
 - **AI & Machine Learning:** TensorFlow, Keras, ONNX, Scikit-learn, Edge AI
 - **Hardware & Platforms:** Atmel, STM32, NXP i.MX, ESP32, Raspberry Pi, Allwinner
 - **Protocols:** MQTT,RabbitMQ, CAN, SPI, UART, I2C, HTTP, WebRTC, FTP, SSH, SOAP
 - **Cloud & DevOps:** Docker, Kubernetes, Jenkins, Ansible, Azure, Nexus, Prometheus
 - **Electronics & Mechanical:** Altium, KiCad, SolidWorks, PCB Design, 3D Printing, Metal Sheet & Drawing & Molding injection
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ADDITIONAL PROJECTS

- **Qoobinoo AI:**s a fully integrated platform designed to teach children programming and embedded AI/ML. Including an Atmega32u4 microcontroller development board and an online visual IDE similar to Blockly.
 - **Elissa Board:** Design and concept custom Linux computer single board like raspberry pi based on Allwinner A13 soc (1Ghz / 512 Mo RAM / 8GB eMMC)
 - **Youpi OS:** Create a custom Linux RTOS image for scratch with specifically QT GUI for smart aquarium
 - **Redox OS Contributor:** Unix-like OS with a microkernel.
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VOLUNTEER EXPERIENCE

- **Technical Analyst – Mobile World Congress 2025**
 - **Lecturer & Trainer – IEEE Tunisia Section** (2021–Present)
 - **Co-Founder – Tunisian Maker Community** (2021–Present)
 - **President – CyberSec Club** (2018–2020)
 - **Co-Founder – MustiRobots** (2018)
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LANGUAGES

- **Arabic:** Native
- **English:** Fluent
- **French:** Fluent
- **Italian:** Beginner