BOUSSELMI BESSEM

Embedded System Expert | IT Project Manager - PMP® Certified | Consumer Electronics Innovator | AI & IoT Expert | Senior Software Developer

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PROFESSIONAL SUMMARY

Passionate and results-driven IT product leader with over **8 years of experience** taking cutting-edge consumer electronics and IT products from concept to market. Proven expertise in team leadership, system integration, and AI-driven embedded applications. Currently leading an R&D team at Nokia to enhance the reliability of network elements.

EXPERIENCE

Linux Embedded System Project Manager – Sagemcom (Tunisia)
Oct 2025 – Present

- Led the end-to-end development of an **embedded linux** data concentrator system.
- Leading **GenAI** Pilot Project
- Managed cross-functional project execution

Tech Leader / Manager R&D Team – NOKIA (Hungary)
Jan 2025 – Sept 2025

- Lead and mentor a high-performing **R&D team of 16 developers and testers**, improving software reliability for critical GSM-R, 2G to 5G network elements.
- Architect and drive the development of high-performance embedded software, resulting in a **15% improvement in system stability** in the first six months.
- Streamlined project delivery by implementing agile methodologies and improving cross-team coordination, reducing the bug-fix lifecycle by 25%.
- Serve as the primary technical point of contact for resolving complex, system-level integration issues.

Embedded Team Leader – BMW Group (Germany)
Jan 2024 – Jan 2025

- Served as a key **member of the management** team for the global infotainment project, coordinating software efforts across more than **4000 developers and testers.**

- Spearheaded the Linux & Android integration strategy, delivering a stable, unified platform for BMW's next-generation vehicle architecture.
- Led the Yocto Build & Release Team, optimizing the build pipeline to reduce compilation times by **40% and accelerate feature deployment.**
- Chaired the Configuration Control Board (**CCB**) and weekly integration planning, resolving critical dependencies to ensure project milestones were met on schedule.

Senior AI Embedded Engineer – Tuito (France)
Nov 2022 – Dec 2023

- Developed and maintained **custom Linux images for AI applications** using the Yocto Project, creating a reliable and secure OS for edge devices.
- Integrated and optimized neural network models for real-time sensor data processing, achieving a **30% reduction in inference latency** on resource-constrained hardware.
- Engineered optimized TensorFlow Lite and ONNX models for offline voice recognition, enabling a 78% command recognition accuracy without cloud dependency.

Senior Embedded Software Engineer – GÉOTHENTIC (Canada, Quebec)
Aug 2021 – June 2022

- Designed and implemented a secure bootloader for NXP i.MX RT processors and developed a robust cross-compilation pipeline for ARM-based embedded systems.
- Engineered and delivered ISO 26262-compliant automotive software solutions, meeting critical functional safety requirements.

Product & R&D Leader – GENICAL (Tunisia)
Jun 2017 – Aug 2021

- **Product Leader (2018-2021):** Led the end-to-end development of a consumer IoT product, overseeing hardware, firmware, and cloud teams. Managed factory selection and manufacturing processes, successfully launching the product to a national market.
- **R&D Team Leader (2017-2018):** Led a 6-member team focused on IoT and embedded product development. Designed functional prototypes and defined hardware/software architecture for new product lines.

PROJECT HIGHLIGHTS

Fakrouna: AI-Powered Sea Turtle Tracking System

- Designed and built a satellite monitoring device for tracking endangered sea turtles, gaining recognition from **international newspapers and global news channels** for its impact on marine conservation.
- Developed AI-based data analysis models to study migration patterns and integrated GSM, GPS, and LoRa Satellite Communication for robust, real-time tracking in remote marine environments.

Linklove.tn : Smart Friendship Lamps

- Led the full product lifecycle, from concept to commercial launch, for an IoT lamp that connects people via touch.
- Managed hardware design, firmware development (Embedded C++), and cloud integration, ensuring seamless real-time updates.
- Successfully **brought Linklove to market for global consumers,** overseeing marketing, pricing, and manufacturing partnerships.

TECHNICAL SKILLS

- **Programming Languages:** C, C++, Python, C#, Rust, Bash, SQL
- **Embedded Systems & IoT:** RTOS, Yocto, OpenWrt, Buildroot, POSIX, Zephyr OS, Linux Kernel
- **AI & Machine Learning:** TensorFlow, Keras, ONNX, Scikit-learn, Edge AI
- **Hardware & Platforms:** NXP i.MX, STM32, ESP32, Atmel, Raspberry Pi, Allwinner
- **DevOps & Cloud:** Docker, Kubernetes, Jenkins, Ansible, Azure, Nexus, CI/CD
- **Protocols:** MQTT, RabbitMQ, CAN, I2C, SPI, UART, HTTP, WebRTC, TCP/IP, LoRaWAN
- **Version Control:** Git, GitHub, GitLab, Bitbucket
- **Design & Mechanical:** Altium, KiCad, SolidWorks, PCB Design, 3D Printing

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EDUCATION

Project Management Professional (PMP) ® - Project Management Institute

Computer Engineering Degree – *Mobile Embedded Systems & Software*
Private Higher School of Engineering and Technology

VOLUNTEER EXPERIENCE & LEADERSHIP

- **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)

LANGUAGES

- **English**: Fluent
- **Arabic**: Native

French: Fluent
Italian: Beginner