

Developer & Designer Consumer Electronic Products (3 Products in market | more than 10K units sold) - Embedded Systems Developer - Software Developer

WHO AM I?

I am Bousselmi Bessem, a developer from Tunisia with a deep passion for technology, especially in the realm of creating intelligent and innovative consumer products. My journey as a coder started at the age of 13, when I discovered ActionScript and built my first video game. That initial experience was unforgettable and motivated me to pursue a career in technology with the aim of making a significant impact in the field.

EXPERIENCE

Nov 2022 - Present Hybrid, France	Senior AI Embedded Engineer (Contact) Create custom Linux image with Yocto project for AI application to deploy in smart product Performance optimization (Ideas, Conception) Search for technical solutions (Targets Hardware, Software) Integrate and optimize AI models on hardware targets for the online / offline and real-time exploitation of multi-sensor data, neural network models, IoT communication stacks. NXP i.MX8 / Allwinner H3 / Yocto / Embedded Linux / Tensorflow lite / Python / ONNX / C++ / C / Offline Voice Recognition / Docker	Tuito
Aug 2021 - Jun 2022 10 mo Remote, Canada	Senior Embedded Software Engineer (Full time) Develop & design specific Bootloader for NXP i.MX RT Processor Design centralization pipeline for embedded cross compilation (ARM) based on Devops Create & development new generation of product Research, development and manufacture of internal tools (Software / Hardware) Analyze and find solution for bugs in products Embedded System for Automotive - ISO26262 / AutoSar / NXP-FreeScale / Rtos MQX OS / IoT / Python / Postgresql / 3G/4G/GPS/WIFI/BLE / Electronics & Signal processing / CAN Bus / Jenkins	GÉOTHENTIC INC
Jul 2020 - Aug 2021 1.1 yrs Tunisia, Morocco	Product Leader (Full time) I efficiently developed the production unit for SODEXO TUNISIA and MAROCCO to align with the principles of Industry 4.0. I oversaw the design of a new IoT product intended for the general public. I effectively supervised and coordinated activities between different teams such as mechanics, electronics, and programming, while ensuring that hardware design, plastic injection design, and firmware were properly tested and validated. I played a crucial role in selecting suitable factories and manufacturing partners for the company. C Embedded / Zephyr OS / C# / Altium / SolidWorks / Python / Mqtt TCP/IP / WIFI/BLE / Security in IoT / Management / Scrum	GENICAL
May 2019 - Aug 2020 1.3 yrs Ariana, Tunisia	R&D Team Leader (Contract) Headed a six-member developers team at a startup specializing in IoT, Machine Learning, and research in collaboration with Cifode'com Labs. Tasks include Select technologies, Select hardware parts, Prototyping IoT and Embedded Product, Leading the team and solving problems C / C++ / Mqtt / Hardware Design / 3D Printer / LPKF Prototyping / Micro-Controller / Product design / Project Management / Team Management	LOLIPOP
Jun 2017 - Aug 2018 1.2 yrs Tunis, Tunisia	Junior Embedded Software Engineer (Full time) Developing systems and applications for "CKSSQUARE" company specialized in automated exchange systems. C / C++ / Linux	LOGAWIN
Dec 2012 - Jun 2017 4 yrs Remote, Online	Freelance Developer (Part time) More than 100 Project have been delivered in many fields (Embedded, IoT, Web, Desktop, Cloud) Our customer references: Horizon Data / SahaOnline / Al Baraka Bank Lebanon / Qatar University / Al-Manar University search labs	

EDUCATION

ACHIEVEMENT & PROJECTS

Qoobinoo AI(Qoobinoo.io) : is a fully integrated platform designed to teach children programming and embedded AI/ML . It consists of both hardware and software components, including an Atmel 32u4 microcontroller development board and an online visual IDE (Integrated Development Environment) similar to Blockly.

AVR / Bootloader / C/C++ / Kicad / Electron js / Tensorflow lite / micro

Fakrouna V1 : Leading a project in partnership with the University of Sfax for Sciences to create satellite monitoring devices for sea turtles in the Mediterranean and analyze their data to understand their behaviors

Management / Research / LORA/GSM/Satellite/GPS / Data Mining / IoT / STM32 Cortex-M0

Elissa Borad: Design and concept custom Linux computer single board like raspberry pi based on Allwinner A13 soc (1Ghz / 512 Mo RAM / 8GB eMMC)

Kicad / RAM/eMMC / PMIC / RF / USB/Ethernet/HDMI / U-BOOT

Youpi Operating System: Create a custom Linux RTOS image for scratch with specifically QT GUI for smart aquarium content artificial intelligence features

Linux from Scratch / Docker / TensorFlow Lite / QT / MQTT / POSIX / SysCall

Redox OS: Contributing in Redox OS project to build the next generation Unix-like OS with microkernel

Rust / microkernel / Unix / ARM / POSIX API / SHELL

Hand Talk: Gloves analyzing with AI model the sensory data of hand and finger motion and transfer it to a voice or App

Raspberry / Python / TensorFlow & Scikit learn / Flutter / Machine learning

BigYum: Create with Flutter A social network for brand food recipes like Instagram app

Flutter (Frontend) / Laravel (Backend) / Docker / Firebase / CI/CD

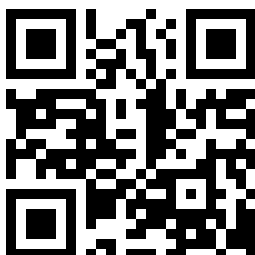
Sadi9i.org: The first site in Tunisia that connects people to adopt pets for free - (Wordpress)

VOLUNTEER EXPERIENCE

2021 - Present	Lecturer / Trainer Presenting lectures in the field of the Internet of Things Presenting Workshops Judging at IEEE Hackathon	IEEE Tunisia section
2022	Member NGO. We fight against environmental disasters by organizing actions of reforestation, cleaning, selective sorting and recycling	Soli & Green
2021 - Present	Co-Founder Group dedicated to share information and open source DIY projects	Tunisian Maker Community
2018 - 2020	President/Vice-President Club specialized in information security that offers training workshops in ethical hacking and participate to international / national Hackathons	CyberSec Club
2018	Co-Founder Club to teach children the basics of robotics and programming for free.	MustiRobots

LANGUAGES

Arabic - Native
English - Professional
French - Professional
Italian - Beginner

ONLINE PROFILE**TECHNICAL SKILLS**

Desktop: C#, VB.NET, QT C++, Python, RUST, GTK+, JAVA (I hate so much)

Embedded System & Linux Embedded & IoT: C, C++, BASH, Python, POSIX API, RTOS, Linux From Scratch, Yocto, Buildroot, OpenWrt

MCU/CPU: STM32, NXP Kinetis, NXP i.MX, ESP32, AVR, PIC, Raspberry, Allwinner

Web: PHP, Symfony, Laravel, Nodejs, Django, HTML/CSS/JS, Wordpress, PrestaShop, Browser Extensions

Database: MongoDB, MySQL, MSSQL, PostgreSQL, SQLite

AI&ML: Tensorflow (JS/LITE/MICRO), Keras, Scikit-learn, Pandas, Numpy

Mobile: Flutter, Dart

Cloud: Kubernetes, Docker, Jenkins, OpenKVM, Azure DevOps Server, VMware, Ansible, Nexus, Prometheus

Electronics: Altium, Kicad, Amplifier, Sift register, Decoder, PMIC, Multiplexer, Flash, EEPROM

Mechanical: Solidworks (Metalsheet & Drawing & Molding injection), 3D printing

Protocols: SSH, FTP, SOAP, HTTP, WebRTC, REST, MQTT, RabbitMQ, CAN, UART, I2S, I2C, SPI

Tools & Other: Git, Confluence, Jira, Photoshop, Illustrator, ClickUp