Raziel Sabati

Embedded Software Engineer

054-4272291
Email: raziel674@gmail.com
LinkedIn: LinkedIn_profile
Github: Github_profile

Embedded Software Engineer with 2 years of hands-on experience developing commercial-grade systems.
Specialized in firmware design (C/C++), real-time systems, and high-precision motion control.
Strong system-level mindset with proven ability to identify bottlenecks and deliver end-to-end solutions, including custom Full-Stack tools to improve operational efficiency.

PROFESSIONAL EXPERIENCE

Embedded Software Engineer, Caeli Technologies **2024 - now**

- Led the development from scratch for a commercial-grade system using **ESP32 (PlatformIO)** and **PIC (MPLAB)**.
- Developed custom drivers and wrappers for sensors and peripherals via **SPI, I2C, UART, and Bluetooth.**
- **UI & RTOS:** Delivered a high-performance embedded UI on integrated displays, using FreeRTOS task partitioning to improve system stability and resource utilization.
- **Motion Control:** Integrated high-precision servo systems achieving **sub-degree accuracy**, optimizing software to mitigate mechanical constraints.
- Designed and built an end-to-end **calibration solution**: 3D-printed jig + PIC-based PCB with I2C encoders and temperature sensors, enabling real-time motion accuracy validation in collaboration with mechanical engineers.
- Quality & Compliance: Authored comprehensive calibration protocols and technical documentation in alignment with **NIOSH and ISO 9001:2015 standards** to ensure operational safety and market readiness.
- **Systemic Initiative & Traceability:** Identified tracking gaps and established a unique serialization format for all system parts. Developed a custom Full-Stack tool (Node.js/MongoDB) to manage product hierarchy, ensuring digital traceability across the entire product lifecycle.

PROJECT

Major Project: Remote Decoy Embedded System **2023-2024**

An embedded system designed to simulate human presence and deceive enemies.
The system consists of a Home Unit and an External Unit, connected via long-range communication, which creates the illusion of human activity using light, sound, and heat.

- Process consist of Agile methodology.
- Project is managed on GitHub.

EDUCATION

Azrieli College, Jerusalem **2021 - 2025**
B.Sc in Software Engineering

SKILLS

Embedded & Firmware:

Microcontrollers:	• ESP32 • STM32 • PIC	**Peripherals:**	• Servo Motors • Displays • LoRa modules
Communication Protocols:	• UART • I2C • SPI • BLE	**Architecture:**	• FreeRTOS • Driver/Wrapper development.

Programming Languages:

- C
- C++
- Python
- Java
- SQL, MongoDB
- HTML
- CSS
- JavaScript

Tools:

- PlatformIO
- MPLAB X IDE
- Git
- GitHub
- QA Protocols
- ISO 9001:2015
- NIOSH

IDF - MILITARY SERVICE 2017 - 2020

- Combatant in Sayeret Egoz

LANGUAGES

- Hebrew - Native
- English – Fluent