

# Nuno Nogueira

Embedded Software Developer  
🌐 Stockholm, Sweden, CET



## About

Embedded Software Developer with hands-on experience in microcontrollers and real-time operating systems, emphasizing device-to-cloud connectivity. Proficient in C, CMake, AssemblyScript and a sprinkle of Rust, with a proven track record of building, testing, and maintaining robust field-deployed systems. Also engaged in PCB and CAD design as an hobby.

## Work Experience

**Electrolux** 2024 - Current  
Embedded Software Developer

Developed a user interface optimized for low-end devices using a WebAssembly runtime and Zephyr OS.

**Kisi** 2021 - 2024  
IoT Developer / Gen3 Team Lead

Developed the Kisi Controller Pro 2 from early revisions to production ready. Worked on the firmware of a 4-channel Wiegand to UART communication. Designed the first architecture for RFID cards and increased the limited 4 supported cards to as many as available. Created a new testing framework that reduced the execution time in 76% and the lines of code in 59%. Researched and took the lead on the planning for a new generation of devices and IoT connectivity, which implied going through serverless services such as: AWS IoT Core or AWS GreenGrass. Designed a new development environment for freeRTOS development mostly written in CMake and with support for VSCode. Developed a bluetooth central application to manage the Silabs BGM220 module to connect to Kisi peripherals and optimized it with parallel discovery, all written in C.

**Academia de Robotica** 2020 - 2021  
Robotics Teacher

Instructed and guided children and adolescents as they embarked on their initial exploration of the world of robotics.

**AddVolt** 2018 - 2018  
Intern

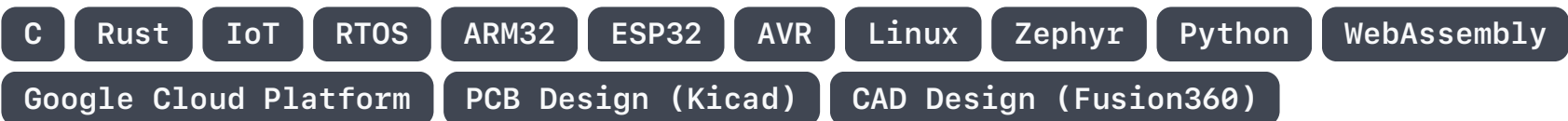
Deployed an over-the-air anti-faults protocol, written in C, to a multi-node network.

## Education

**University of Porto** 2018 - 2021  
Master's degree in Electrical & Computer Engineering with specialization in Embedded Systems and Microelectronics.

**Polytechnic University of Porto** 2015 - 2018  
Bachelor's Degree in Electrical & Computer Engineering

## Skills



## Projects

### esp-drv8833 •

A Rust crate that provides control over the DRV8833 Dual H-Bridge Motor Driver

Side Project Rust

### 3mode-controller •

Hardware Controller for Hobbyist Projects with support for ESPNow, nRF24, and Bluetooth

Side Project esp-idf  
CAD Design PCB Design

### BattleButBot •

Your Ultimate Antweight Fighting Robot Companion

Side Project ESP32  
CAD Design PCB Design C

### 4WD Robot •

How to build a simple 4WD Robot

Side Project CAD Design

### Portable Smoke Extractor •

A portable Smoke Extractor to deal with all those nasty fumes!

Side Project CAD Design  
PCB Design

### End Of Line Testing Board •

A End Of Line Board for Testing Access Control Systems

Side Project CAD Design  
PCB Design Access Control

### Personal Website •

My personal website – where I write about my side projects and other things I'm passionate about.

Side Project Portfolio Blog

