# Nuno Nogueira

Embedded Software Developer focused on making things.

🌐 Stockholm, Sweden, CET

## About

As an Embedded Software Developer I've acquired experience with microcontrollers, Linux and real time operating systems with a strong link between the device and the cloud. Mostly focused on C/C++, CMake and Javascript. I successfully build, test and maintain code for systems on the field. My hobbyist side also works with PCB & CAD Design.

## Work Experience

### Kisi
2021 - Current

IoT Developer

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

C  C++  IoT  RTOS  ARM32  AVR  Embedded Systems  Linux  Control Systems  Python  Javascript  Google Cloud Platform  PCB Design (Kicad)  CAD Design (Fusion360)

## Projects

### CMake Gecko SDK •

Gecko SDK Blinky example using CMake.

Side Project  CMake

### BattleButBot (WIP) •

Your Ultimate Antweight Fighting Robot Companion

Side Project  ESP32
CAD Design  PCB Design  C/C++

### 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

### Arduino Due + KA3005P •

Library to facilitate seamless communication between the Due and the KA3005P power supply

Side Project  Arduino  USB

### Personal Website •

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

Side Project  Portfolio  Blog