

## FRANCOIS BERDER

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I am a software engineer specialised in embedded systems, currently working as a freelancer.

### EDUCATION

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<b>Imperial College London</b> (London, UK)	<b>2011 - 2015</b>
Master of Engineering in Computer Science	
<b>Lycée Français Charles De Gaulle</b> (London, UK)	<b>June 2011</b>
Scientific Baccalaureate with highest honours	

### WORK EXPERIENCE

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<b>Anjuna</b> (Remote position, working from France)	<b>July 2022 - February 2023</b>
<b>Software Engineer</b>	

Contributed to the development of a software product that protects applications confidentiality and integrity by relying on Intel SGX technology.

- Fixed several bugs reported by customers by examining logs, using gdb or strace, decompiling code to x86-64 assembly...
- Wrote additional unit tests in C++ and system tests in Python
- Investigated Jenkins pipelines failures, fixed Dockerfile
- Improved tools written in Python and Go

<b>Ajustco</b> (Remote position, working from France)	<b>June 2022 - December 2022</b>
<b>Software Engineer</b>	

Development of a graphical user interface for configuring and running a laser marker.

- Gathered requirements from the customer
- Wrote an application in Python and Qt that interacts with a MySQL server
- Packaged a Linux application to ease distribution to the customer

<b>Spin</b> (Remote position, working from France)	<b>July 2021 - December 2021</b>
<b>Embedded Software Engineer</b>	

Development of an electric scooter rental service.

- Debugging firmware written in C on a STM32 running FreeRTOS
- Relied on static analysis tools: smatch, cppcheck and clang static analyzer to find
- Refactored CMake configuration files

<b>ARM</b> (Cambridge, UK)	<b>October 2020 - May 2021</b>
<b>Senior Software Engineer</b>	

Support for a build system written in Go, Python and Bash for C and C++ software running on Linux and Android platforms.

<b>Kynesim</b> (Cambridge, UK)	<b>July 2017 - October 2020</b>
<b>Embedded Software Engineer</b>	

Development of embedded systems solutions in a small consultancy company. Responsible for designing software architecture, implementing specifications and automated tests either alone or as part of a small team.

#### Key learnings:

- Experience writing firmware in C on various microcontrollers: MSP430, Cortex-M0 and Cortex-R4
- Wrote Linux applications in C++ running on TI AM3552 (ARM Cortex-A8)
- Learned how to read schematics, debug hardware prototypes

**Imagination Technologies** (King's Langley, UK)

**January 2016 – June 2017**

**Graduate Software Design Engineer**

- Provided support for an IoT solution named Ci40 running OpenWRT
- Created a library in C and Python to interface Ci40 with many sensors
- Wrote production test software in Python using PyQt
- Implemented drivers for PIC32 peripherals in C on Contiki and RIOT-OS

**IT SKILLS**

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Programs created: HAL for PIC32 for RIOT-OS and MyNewt OS (upstreamed), multithreading on Cortex-M4F, IoT water pump (includes designing PCB boards in Kicad), etc. Some of these programs are available at:

<https://github.com/francois-berder>

**Programming languages:** C, C++, ARMv7-M assembly, Python, Bash, Go, Rust

**LANGUAGES AND EXTRA CURRICULAR ACTIVITIES**

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**Arts & Sports:** Piano (10 years, Grade 8 – highest UK level), swimming, tennis, sailing, skiing

**English:** Fluent, **French:** Native, **Japanese:** Intermediate (JLPT Level 3)