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Dear Hiring Manager,

I am writing to express my interest regarding the Embedded Systems Junior Software Engineer position that you are currently offering.

I'm a Spanish computer engineer graduating from my B.Sc. Computer Science (specializing in Computer Engineering) shortly before June this year, and I am currently employed as a Python developer in a leading healthcare company that ships software used by healthcare providers all over the world. However, I am most interested in systems and low-level programming, and would like to steer my career path towards this end.

Even though I have little working experience, I have plenty of personal experience regarding systems and low-level programming, being really well-versed in Linux-based operating systems, the C programming language and having a solid foundations on the inner workings of operating systems and software in general.

I believe I'm a good fit for this role because I'm able to learn new skills and languages (both human and computer) with ease in a fast-paced environment. I would highlight my agility at learning new languages and my attention to detail.

Programming and technology has been my hobby since 10, and thus I've been using many technologies related to this field for a long time. In this regard, I would highlight my knowledge of Linux and operating systems, which you can verify by having a look at my GitHub repositories.

In particular, I would highlight the following projects:

- `rzctl(1)` — a command-line utility that sends HID commands to Razer mouse devices for easy customization without using the non-free Electron app supplied by the manufacturer.

- `hid-rzchroma` — a kernel-mode driver for Linux that implements the functionality of `rzctl(1)`, exposing the mouse configuration as multiple attributes in the `sysfs` HID tree.

- `mkinitfs` — a fork of the Alpine Linux `mkinitfs` program that includes a binary for displaying a graphical prompt at boot when unlocking LUKS-encrypted drives is required for booting the system in the `initramfs` boot stage.

- `ddb(1)` — an attempt at writing a debugger for experimenting with the Linux `ptrace(2)` API.

- (not on GitHub) — a set of scripts and a UEFI application that I wrote for managing kernel and driver self-signing, and booting my ArchLinux OS without using a bootloader, taking advantage of the `EFISTUB` implementation in the Linux kernel.

- (not on GitHub) — partially porting SailfishOS, Mer and `libhybris` to my Android phone by using a custom-built kernel based on LineageOS. If you are curious, I successfully ported the system but had trouble setting up the proprietary graphics drivers which were incompatible because they were built against a non-standard bionic libc.

- `osdev` (and more projects not on GitHub) — low-level programming on x86 and arm64 platforms, mostly attempts at writing simple kernels for exploring these architectures' capabilities.

- `serenityos` — made several small contributions to the SerenityOS C++ operating system that got merged into the project, in an attempt to take part of an open-source community.

- Fixing a faulty Thunderbolt controller on my T480 laptop by reflashing the SPI memory that contains a corrupt controller configuration due to a firmware bug that Lenovo would not fix for me.

I would be happy with relocation and like to explore new cities and enjoy the European culture and lifestyle. I've always wanted to move to Germany and would be really passionate about learning the language!

I am really looking forward to this position, and would love to hear from you if you think I am a good fit for this role.

Thank you for your consideration!
Best regards,

Ángel Pérez