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TL;DR

A short journey through my experiences with hardware, software, programming and project management. Too bad I could not add the topics 'hacking' and 'education', as I have a goal to fit everything on a single page.

Hardware

Around 2010 I had to fix a broken desktop PC, which gave me an immense insight into how computers work. I had no one to ask technical questions, so I did all the research myself: which is better for long-term data storage - 12v 3.5 HDD or 5v 2.5 SSD? can a 90W power supply be enough for a Radeon 2Gb graphics card? why are DDR3 pins incompatible with DDR4? what is NX-bit and memory leak? Why is L1, L2 and L3 cache important? What is the maximum amperage of a USB A port and how many USB drives can I connect in parallel? What are north-south bridges on a motherboard? Does the BIOS clock rely on a single 2032 battery for years?

At the same time, I cracked open every electronic device I could get my hands on: where is the GPS antenna on the phone? And the proximity sensor? How does the hard reset button on the e-book work? Why can't I use the stylus on the capacitive touchscreen when I can on the resistive one?

Later, I also worked in a microelectronics company where I had to solder resistors onto the PCB using a microscope, test capacitors and detect faulty SMT components. It was an eye-opening experience for a hardware hobbyist to witness the debugging process of a modern circuit board.

Software

Back in 2006 I tried to create my own OS based on Kubutnu.

It did not turn out to be a proper OS, but I ended up with a solid idea of how OS components fit together, what a kernel is, and how drivers work.

After that came a long road of trying out different Linux distros, including Fedora, Puppy Linux and Kali Linux, hacking neighbours' Wi-Fi passwords, just to see if I was good enough.

Meanwhile, I also tinkered with Windows: removing and reinstalling critical XP drivers on an old PC, installing hacked software on hacked Windows 7 and modifying the Windows 8.1 registry directly. I even had a Mac mini as my main PC for a some time.

In general, I have had a different main OS every two years or so, some of them dual-booted from the main disc and a few times using Windows To Go and DriveDroid as well.

On the mobile side I have tried custom Android ROMs, Resurrection OS and LineageOS have saved my 2 phones from recycling, but at the cost of sleepless nights trying to boot into TWRP custom recovery and flash G apps. I also had Android x86 as my main OS for a while.

In short: I just love software.

Programming

My first exposure to programming was in 2003 with Turbo Pascal, which I don't remember much more than variables and function declarations, but it made me think in terms of universal programming concepts like variable assignment, function declaration, loop/Boolean and memory allocation.

Then, in 2012, I created visual projects with Processing; it was fun and very motivating to see mathematics translated into beautiful visual objects on the screen.

(Then I studied BlueJ, but I don't remember much more than wrestling with Java syntax in there).

By 2015, I knew the basic concepts of object-oriented programming and had done some simple Python projects with TKinter.

Around 2019 I jumped into the web and learned frontend with HTML/CSS/JavaScript. Then in 2021 I built a medium-sized frontend application without any framework and since then half of my hair has turned gray, so I decided to learn React. Although I don't consider myself a frontend developer at the moment.

Meanwhile, I've gotten into back-end and ops - PHP, Laravel, SQL, deployment, testing, networking, CI/CD, AWS, GitHub Actions and Docker containers. That's where I feel most comfortable.

Project management

I have recently had to take on more responsibility than just writing code. I was brought in to manage some projects because of the combination of my hard and soft skills for this job.

And as I have no formal training in project management, all my knowledge comes from hard-earned experience after working on some failed and some successful projects.

For me, everything that's important in project management boils down to two main points:

- 1. A motivated individual developer delivers more value than an unmotivated team. The project manager must do everything possible to keep individual contributors motivated.
- 2. Planning ahead, structuring the development process, defining roles and reporting, delegating tasks and managing time is already half the job done. A project manager must be well organized in order to organize others.

I know there are many more cornerstone ideas that I need to explore within the PM field, but these two points shape the way I think about project management.