



Josuah Demangeon

Biology, Computer-Science student, then System Administrator. A passion for hardware draws me toward FPGA, Integrated Circuits, digital signals and their integration onto analog ecosystems. Spending most of my time trying, experimenting, discussing, taking inspiration from pioneers, and trying again until it works.

Key skills

Broad coverage from high-level application down to the very low level of electronics. A preference for Hardware/Software and Analog/Digital interfaces.

Software: Writing system software, compiling, debugging kernel, RTOS, drivers

Firmware: Bare-metal programming on AVR, ARM, RISC-V, 8051 microcontrollers

Gateware: SystemVerilog with Cocotb, Verilator and Yosys, ported to OpenBSD

Hardware: Part selection, firmware and circuit integration from datasheets

Analog: RF signal filtering, digital signal integrity troubleshooting

PCB design: Simple boards in KiCAD (alternative to Altium), reducing noise

Manufacturing: etching, rework, prototyping, inspection, reflow soldering

Other: Technical Documentation, experienced with organised team collaboration

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<https://josuah.net/>

<https://github.com/josuah/>

Born in 1994 in Brittany but would come live close to work

Car driver licence

2022: Panoramix Labs micro-enterprise

Useful for billing paid contribution to a small hardware project: an ongoing development board interfacing an RP2040 microcontroller and an ICE40 FPGA.

2022: ANFR Amateur Radio License

Technical electronics and legislation exam. Authorisation to broadcast radio frequencies on allowed ranges. Used to experiment with RF signals.

2018-2021: System and Net Admin at DIS

Network and System Admin team at a hosting provider, offering services and support to qualified clients.

Working with passion in a high-paced environment:

- Anticipating and recovering emergencies
- Constant communication with clients and teammates
- Debugging with low-level system and network tools
- Continuously building the documentation
- In charge of the billing of SSL certificates

2017-2018: Epitech School of IT

Programming in C and x86 assembly, involving deadline management and teamwork.

2017: Operating System team at Gandi.net

Internship in a hosting, networking and security company Taking part in the Agile workflow, with code review, weekly technical meetings. FreeBSD, ZFS and Linux.

2016-2017: Univ Rennes Computer Science

Linear algebra, Arithmetics, Physics, Function analysis, Statistics. Self-teaching C language and shell scripting.

2013-2016: Univ Rennes Molecular Biology

Genetics, Cell, Plant, Population, Ecosystem Biology, Atomistics, Statistics, BioChemistry, Laboratory practice. Theory of Mass Spectrometer, Microscopy, Sequencing, Chromatography and interpretation of results. Reading and writing research papers.