Embedded Developer

Josuah Demangeon

After 3 Years as a Sys/Net Admin
Self-Teaching Embedded Firmware Development

Practical

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https://josuah.net/

French (5/5), English (4/5), Spanish (1/5)

Car licence, no car, can commute anywhere

Can move abroad to live close to work

Born in 1994 in Brittany, likes ASCII art

Centers of Interest

Software:

System software (daemons)

System Libraries

Operating System Kernel

Driver

RTOS, Embedded Application

Firmware, SDK

Hardware:

FPGAs, programmable I/O

ASICs, making of integrated chips

PCBs, KiCAD, reflow, soldering

Analog:

VLSI production process

Analog behavior of Digital Systems

Signal Processing

Other:

Easy to read Documentation

Organising Team Communication

Continuing education

2021 - now **Embedded and FPGA training**

Finally some time to learn! Reading books, trying on real hardware, inspired by zipcpu.com, ganssle.com, eevblog.com, libopencm3.org, avrs.fi, skarnet.org, antikernel.net...
- Building SDKs for AVR, ARM, RISC-V, 8051 and Xtensa controllers
- Driving I2C sensors, PWM servo motoros, SPI Ethernet and Radio
- Sending the code to the chips with DFU, OpenOCD, SWD/JTAG...
- Experimenting Wishbone-based circuits in Verilog and SymbiYosys
- Reading technical documentation for hardware, protocols, C standard
- PCB design and manufacturing: masking, etching, inspection, soldering

Professional experience

2018 - 2021 **System and Net Admin at DIS**

Small company (20 pers) with a high pace and passionated coworkers
- Maintenance of web servers and other production systems, mostly Debian
- Debugging, Diagnosing, seeking problems origin
- Linux / Web / Routers / User Infrastructure and Networks
- Communication with clients, making sure their deadlines are met
- Documentation with precious help of teammates

2017 - 2017 **Short internship at Gandi.net, operating system team**

Trying to understand everything they do, and not break anything as I try.
- Kanban and Agile methodologies, code reviews, technical discussions.
- Discovering operating system internals: FreeBSD+ZFS, booting process

Initial Studies

2017 - 2018 **Epitech School of IT**

I enjoyed a lot but not enough system programming
- C and a few x86 assembly programming
- network protocols parsing

2016 - 2017 **Computer Science - University of Rennes 1**

Very interesting Mathematics but quite no computer science at all
- Linear algebra, Arithmetics, Physics, Function analysis, Statistics
- Learning programming at home: shell scripts, hello world in C

2013 - 2016 **Molecular Biology - University of Rennes 1**

Unfinished, but interesting biology and bioinformatics studies:
- Genetics, Cell / Plant / Population / Ecosystem Biology...
- Atomistics, Statistics, BioChemistry, Laboratory practice
- Scientific methodologies: searching information, publishing research