Marco Fontana

Electronic Engineer

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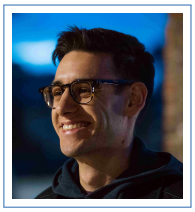

Education

2020–2024 **Master's Degree in Electronic Engineering**, 100
Alma Mater Studiorum - University of Bologna
Master Thesis *Hardware and Software development of an Ethernet module on FPGA*

2016–2020 **Bachelor's Degree in Computer Science, Electronic and Telecomunication Engineering**, 104
University of Parma
Thesis *Performance analysis of an IP module for FFT computation on FPGA*

2011–2016 **Secondary School certificate in Technical Institue of Technology**, 94
Istituto Superiore Enrico Fermi – Mantova
Thesis *Rubik's cube solver robot*

Master Thesis

I have contributed to AlSaqr project, an Open Source SOC that embeds a RISC-V 64-bit CPU and other peripheral to be used on drones. My job was to implement an Ethernet IP inside the SOC and verify it with simulation on FPGA (VCU118 and Genesys2) and Linux OS (CVA6-SDK).

References
AlSaqr: `https://github.com/AlSaqr-platform/he-soc`
CVA6-SDK: `https://github.com/AlSaqr-platform/cva6-sdk`

Experiences

from 05/2024 to Today **Electronic Engineer**, *Fraste*, Nogara (VR)
Development of electrical system for drilling rigs.

from 04/2024 to 05/2024 **NuttX Driver Developer**, *University of Bologna*, Bologna (BO)
Development and test of an Ethernet driver for NuttX.

from 05/2015 to 07/2015 **Electrician**, *Gasparini P.I. Andrea*, Castel d'Ario (MN)
Electrical system for houses

Computer skills

Programming Languages
SystemVerilog, Verilog, VHDL, Bash, C, Python, C++, Lua, Matlab, AVR-Assembly

Markup Languages
CSS, HTML, LaTeX, Markdown

Operating Systems
GNU/Linux, Arch, Ubuntu, Debian, Windows, Mac OS

3D Modeling Softwares
FreeCAD, OpenSCAD, Fusion360

Office Applications
Word, Excel, PowerPoint

Development Systems
Git, Make

Languages

Italian Native

English B2 (read, written and spoken)

Interests

- Books: science fiction, fantasy, classics, *etc.*
- 3D Printing and Do It Yourself;
- Technology, videogames, computers;
- Open Source and self hosting;

Personal Projects

Library for light sensor TSL2591 `https://github.com/its-fonsy/tsl2591-avr`

Library written in C for the light sensor TSL2591 aimed to be used with ATmega328P.

Lyrpy `https://github.com/its-fonsy/lyrpy`

Python application that prints on the terminal the lyrics of the playing song and it emphasize the singed verse.

Fastfingers `https://github.com/its-fonsy/fastfingers`

A replica for the terminal of the "10FastFingers" games written in C using ncurses library.