




Francesco Mignone





 Turin

 fmignone98@gmail.com

 +39 331 905 9951

 GitHub

 LinkedIn

 ilnerdchuck.web

Programming Languages

C
Assembly x86/RISC-V/ARM
SQL

HDL Languages & Tools

Verilog
VHDL
Verilog/SystemVerilog
UVM
Modelsim/Questasim
Design Compiler
Innovus
Quartus Prime

Scripting

TCL
Bash/Shell

Embedded Systems & Tools

FreeRTOS
Arduino
Raspberry Pi
STM32

Softwares

Docker
KiCAD
Arduino IDE
GDB
Git
Linux

Technical Skills

Soldering
Logic Analyzers
PCB design
3D Printing & Design
LaTeX

Spoken Languages


Italian - Native
English - C1 IELTS

For more information's on the projects or me visit my website!

EDUCATION

2024 - Today

Polytechnic University of Turin: Masters Degree in Embedded Systems

 Turin

Coursework: Microelectronics Systems, Synthesis and Optimization of Digital Systems, Electronics for Embedded Systems, Specification and Simulation of Digital Systems, Software Engineering, Cybersecurity For Embedded Systems, Operating Systems for Embedded Systems, Computer Architectures (RISC)

Currently Attending: Energy Management for IoT, Embedded Architectures for AI and ML, Integrated System Architecture, Testing and Fault Tolerance, Electronic Systems Engineering

2017 - 2024

University of Pisa: Bachelor Degree in Computer Engineering

 Pisa

Relevant Coursework: Data Structures and Algorithms, Digital Logic Design, Computer Architectures (x86) and Kernel programming, Operating Systems, Electronic Circuits Analysis, Digital Electronics, Analog and Digital Communications, Computer Networks, Operations research, Automation Engineering

Thesis: Extension for VSCode to debug a multi-programmed Kernel

PROJECTS

2025

DLX Microprocessor

VHDL, Questasim, Design Compiler, Innovus

RTL Design, Simulation, Synthesis and Physical Design of a DLX Microprocessor

- Pipeline implementation: Control Unit and Datapath
- Subset of DLX ISA: Load, Store, Arithmetic, Logic, Branch and Jump instructions
- Developed custom scripts to automate the Simulation, Synthesis and Physical Design process

2025

Verification Workshop

System Verilog, Questasim

Hands-on sessions of SystemVerilog and UVM for hardware design and verification to test basic designs

2025

Low-Power Contest

TCL, Prime Time, Design Compiler

TCL script for post Synthesis analysis to optimize the leakage power of a design with a Multi- V_{th} approach

2024 - Present

GBA-SPI

KiCAD, RaspberryPi, Arduino

- Schematic and PCB design
- LiPo battery protection and charger circuit
- External custom cartridge modules via GPIO
- ATmega power handling and I²C communication with a RaspberryPi
- Custom RaspberryPi I²C Driver for the ATmega

2016

3D-Printer

I built a replica of a Prusa 3D printer form scraps running the Marlin Firmware.

EXPERIENCES

2017 Ed., 2023 Ed., 2024 Ed.	GOLab•RustLab  Firenze Go, Rust International Go and Rust programming language conference.
2022 Ed.	DEVfest  Pisa A general tech driven conference.
2019 Ed.	Maker Faire  Rome A maker event conference.