

Salvatore Gabriele La Greca

Computer Engineer - Embedded Systems Engineer

Embedded Systems specialist. Graduated in Computer Engineering @ Politecnico di Torino. Very and highly interested in Embedded Programming (Bare Metal, Firmwares, Operating Systems) and Electronics Devices (FPGA, SoC, Microcontrollers).



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WORK EXPERIENCE

Research Assistant Politecnico di Torino

09/2022 - Present

Achievements/Tasks

- Fault Tolerant Hardware designer on FPGA

PERSONAL PROJECTS

DLX - RISC CPU (05/2021 - 07/2021)

- A complete RISC processor whose architecture was engineered totally from scratch and implemented in VHDL: **pipelined, Booth multiplier, CLA Adder, Windowed Register File, hazard detection, custom ISA.**

Room Temperature Controller (12/2020 - 01/2021)

- A complex Embedded System to maintain under control the temperature of a room entirely engineered from scratch. **FPGAs (VHDL, Intel NIOS II Soft Core Processor, Processor Peripherals, Bare metal programming)**, Electronics (my own SAR ADC and DC Motor Controller), Communication Protocols, and Memories in general.

Dot Matrix Hardware Multiplier (Fixed Point) (12/2020 - 12/2020)

- My first hardware design in VHDL capable of dot matrix multiplication in fixed point arithmetic between two 32x32 matrices. Direct cols and rows addressing. **Implementation in a real FPGA** with 7-seg display controller and button debouncers.

[RTOS] Morse-based Twitter (10/2020 - 11/2020)

- The "Morse-based twitter" is a real time application for Embedded Systems. **Implemented using TrampolineOS**, an open-source implementation of the OSEK/VDX real time operating system for Arduino UNO.

EUROAVIA Beginner Programming Course (04/2020 - 04/2020)

- A three-day programming course with the goal of giving a base knowledge of what Programming is, the logic behind it and a little introduction with Python.

NASA Space Apps Challenge (10/2019 - 10/2019)

- Our project was called "Sonny", an automated lunar/Mars Rover for rocks mining. We took part in a two day competition at University of Pisa.

AmlRunning (06/2019 - 07/2019)

- A project for my University, done in team, called "AmlRunning". My role was Software & Hardware Engineer. Used Python, Flask, Raspberry Pi, Arduino, Adafruit MotorShield, Servo Motors, various sensors and my experience in software development.

Google Hash Code 2018 (03/2018 - 03/2018)

- Thanks to Google Developer Group Torino!

EDUCATION

MSc Embedded Systems (Computer Engineering)

Politecnico di Torino

09/2020 - 07/2022

Torino

BSc Computer Engineering

Politecnico di Torino

09/2016 - 07/2020

Torino

SKILLS



LANGUAGES

Italian

Native or Bilingual Proficiency

English [IELTS 6.5]

Professional Working Proficiency

INTERESTS

