europass Curriculum vitae

PERSONAL INFORMATION

Giovan Battista · Rolandi

Empoli (FI) Italy

+39 xxxxxx

gbattista at glgprograms dot it

www.giomba.it

git.giomba.it github.com/giomba

Date of birth 1995 | Nationality Italian (EU)

APPLYING FOR

Embedded Software Engineer

WORK EXPERIENCE

october 2021 – ongoing

Embedded software engineer

Job: Design and implementation of a bootloader tailored for different boards of CNC machines, based on Texas Instruments TMS320 DSP family. Implementation of real time drivers for BeRTOS: dedicated field bus communication, augmented reality with laser beam projection. Design and implementation of a cooperative task switching mechanism, to transition from a bare bone firmware architecture. Implementation of unit and integration tests, both manual and automatic, and pipelines for QA and CI in GitLab. Some experience with Yocto build system for embedded Linux BSP and device drivers. Design and implementation of software for a new product based on Atmel microcontroller. Some experience with STM32 and Espressif.

Type: Full time

Employer: Develer s.r.l.
via San Quirico, 233/2
50013 Campi Bisenzio (FI) - Italy

april 2021 – september 2021

Embedded software engineer intern

Job: Development of a novel CAN-bus based communication protocol for monitoring power supply systems in particle accelerators. Research and analysis of a dedicated communication protocol based on CAN bus, using the latest innovations of the industry, and achieve the best trade off between innovation and backward compatibility.

Type: Internship during Master Thesis

Employer: CAEN s.p.a.
via della Vetraia, 11
55049 Viareggio (LU) - Italy

march 2016 – january 2020

BSP customization consultant

Job: Customization of a Debian-based operating system for Olimex A20 Allwinner A20 SoC. Linux kernel reconfiguration for Mali400 based graphical hardware acceleration, OpenGLES, SDL2 and boot from internal NAND storage; implementation of C++ library for GPIO management; backup automation and software package management; periodic maintenance

Type: External consultant, side-job during University

Employer: Electronic Projects s.r.l.
via Tosco Romagnola, 1124
56028 San Miniato (PI) - Italy

EDUCATION

2019 – 2021 **Master Degree in Computer Engineering** 108/110

University: Università di Pisa, Scuola di Ingegneria, English course

specializing courses:
- advanced computer networking, IoT stack CoAP/UDP/IPv6/6LowPAN/802.15.4, MPLS
- cloud computing, virtualization basics with Intel-VT x86_64, Docker containers and OpenStack
- foundations of cybersecurity
- basics of big data, (non-)relational, document and graph databases, artificial intelligence and machine learning

2014 – 2018 **Bachelor Degree in Computer Engineering** 102/110

University: Università di Pisa, Scuola di Ingegneria

Thesis: Design and implementation of multiprocessor support for a multiprogrammed kernel

specializing courses:
- object oriented programming, algorithms and data structures, C++ STL
- electronic computing and operating systems, implementation of an x86_64 kernel via the gcc toolchain and concurrent programming on Unix
- computer networks, stack TCP/IP/Ethernet, Cisco IOS
- software engineering, UML

PROJECTS

Personal project, 2022 – ongoing **ceda**: reverse engineering of Sanco 8003, a French computer from late 1970s

Personal project, 2019 **coppino**: minimal CoAP UDP/IPv6 stack (as per IETF RFCs) for Arduino

University project, 2019 **CYBRG sft**: design of a file transfer protocol, secured against eavesdropping, oracle and replay attacks; uses a PKI and exploits libopenssl

Personal project, 2017 – 2022 **snake6502**: clone of a Snake game for Commodore 64 computer, with cartridge

TECHNICAL SKILLS

Technical skills
- **Software development** C and C++, GNU and TI toolchain, Makefile; versioning with git; QT libraries; container and CI automation;
- **System administration** Linux based server and desktop system, Debian, Arch; LAMP web stack: HTTPS, OpenSSL, Let's Encrypt, client authentication via certificate and smart card; Python and bash scripting;
- **Networking** IPv4 and IPv6, Linux routing, OpenVPN PKI; Mikrotik network equipment (basic);

Computer skills: Office suites and spreadsheets; shell scripting for everyday task automation; fluent with several open source software for personal productivity (photo and video editing for personal amusement)

PERSONAL SKILLS

Driving licence: European type B

Mother tongue: Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2

TALKS

Fosdem, 2024 *A journey documenting the Sanco 8003 computer*, with G. Fieramosca

ADDITIONAL INFORMATION

2016 – 2023

Volunteering at GOLEM, Empoli's Linux club

System and network administrator of VPSs and on-premise servers, VPN, and IPv6 tunnel. Design and implementation of a disaster recovery plan, (un)fortunately put in action after the Strasbourg incident at OVH datacenters, with minimal data loss.

type Volunteering

contact golem.linux.it – via Magolo, 32 50053 Empoli (FI)

Hobby
- I like to clear my mind by hiking, preferably along some lonely path on the slope of a mountain.
- I collect home/retro-computers from 70s to 90s, and sometimes I hack with their hardware and software.

Privacy note Usage of this data is hereby allowed under current privacy laws (IT DL 196/30.06.2003 and GDPR), for job selection purposes