



Simone Shawn Cazzaniga

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● ABOUT ME

My innate curiosity towards the world has led me to study engineering, and I always strive to learn more in both academic and practical ways. I let my passions for engineering, music and volunteering fuel each other, striving for an all-around personal growth. I have been lucky enough to have experienced working in groups, and sometimes leading or mediating between different ones in order to resolve complex problems; I have had the chance to handle performances in public and teach. I am constantly looking for ways to combine passion and technology to build something beautiful, and useful.

● WORK EXPERIENCE

08/2023 – CURRENT Milan, Italy

DESIGN ENGINEER BDSOUND

As part of the electroacoustics and DSP software engineering division of the Innovation team, my job is to research and develop advanced audio solutions for a number of internal or third party products.

• JUCE, C++, Python, Advanced DSP

Website <https://www.bdsound.com/>

02/2023 – 07/2023

RESEARCH ENGINEER [PHD] ST MICROELECTRONICS

As part of the NoC Design team, my job was to develop novel design space exploration techniques to speed the development of complex Multi Core Systems on Chip.

11/2022 – 03/2023

AUTHOR FOR RISC-V FUNDAMENTALS (LFD210) COURSE RISC-V FOUNDATION

I have written content and self-evaluation questions for Chapters 3 through 6 of the **RISC-V Fundamentals (LFD210) course**, covering the details of the RISC-V ISA base, extensions, privilege levels and memory model. The author of each section was required to review other authors' content and give feedback in order to make the writing style, detail of topic coverage and question difficulty uniform across the whole course.

Website <https://training.linuxfoundation.org/training/riscv-fundamentals-lfd210/>

● EDUCATION AND TRAINING

12/2022 – 07/2023 Milano, Italy

INDUSTRIAL PHD IN INFORMATION ENGINEERING (INTERRUPTED) Politecnico di Milano

Address Piazza Leonardo da Vinci, 32, 20133, Milano, Italy | **Website** <https://www.polimi.it/>

03/2020 – 12/2022 Milano, Italy

MASTER DEGREE IN MUSIC & ACOUSTICS ENGINEERING Politecnico di Milano

The Master's Degree program was centered around building an expertise on representation, modeling, manipulation and rendering of signals, especially audio signals, speech, vibrational fields.

I have attended the MMI Track (Music emphasis on audio and sound signal processing).

Thesis covered the state of the art and cognitive impact of low level visual hardware simulators for computer architecture and audio processing applications. Open source tools based on existing projects were developed to show the shortcomings of current offerings and an in-depth requirements analysis was conducted as reference for future work in the field.

Address Piazza Leonardo da Vinci, 32, 20133, Milano, Italy | **Website** <https://www.polimi.it/> | **Final grade** 110/110

2020 Milano, Italy

LAUREA TRIENNALE IN INGEGNERIA DELL'AUTOMAZIONE Politecnico di Milano

Address Piazza Leonardo da Vinci, 32, 20133, Milano, Italy | **Website** <https://www.polimi.it/> | **Final grade** 95/110

2016 Monza, Italy

DIPLOMA DI LICEO CLASSICO Liceo Classico Bartolomeo Zucchi

Address P.za Trento e Trieste, 6, 20900, Monza, Italy | **Website** <https://liceozucchi.edu.it/it/index.do> |

Final grade 79/100

● **LANGUAGE SKILLS**

Mother tongue(s): **ITALIAN**

Other language(s):

| | UNDERSTANDING | | SPEAKING | | WRITING |
|----------------|---------------|---------|-------------------|--------------------|---------|
| | Listening | Reading | Spoken production | Spoken interaction | |
| ENGLISH | C2 | C2 | C1 | C1 | C2 |
| CHINESE | A1 | A2 | A1 | A1 | A1 |

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **DIGITAL SKILLS**

C / C++ / C# Languages | HTML CSS JS | Google Play Developer | IDEs (IntelliJ Idea, VSCode) | Flutter Developer (Android and Web) | Github Pages | openFrameworks | Reaper Digital Audio Workstation | SuperCollider (basics) | Unity (basics) | VirtualBox (basics) | Open Sound Control (OSC) | Machine Learning in Python | Processing (Creative Programming) | Digital Signal Processing (DSP) | Jupyter Notebook | MATLAB | Linear Predictive Coding (LPC) | Wave Digital Filters | Java (Programming) | JUCE Framework

● **ADDITIONAL INFORMATION**

NETWORKS AND MEMBERSHIPS

CURRENT

RISC-V International Individual Member

DRIVING LICENCE

Driving Licence: B

CONFERENCES AND SEMINARS

25/08/2023 – 27/08/2023 – Shanghai, China

RISC-V Summit China 2023 We were able to present my mentee's work in the **Bringing the "Sliderules" Cheat Sheets to the Web** RISC-V mentorship with a poster.

PROJECTS

09/2019 – CURRENT

IdPN Flutter Android App and Website I have acted as Main Software Engineer and Designer for the "IdPN" (Indice delle Parole Notevoli) Android App and Website (idpn.magiwanders.com). This is a personal project carried out in partnership with a friend since high school times.

Link <https://idpn.magiwanders.com>

07/2022 – CURRENT

SHEAS - Simple Hardware Editor And Simulator

Link <https://sheas.magiwanders.com/?select=>

03/2021 – 11/2022

Nand2Tetris Online JS Simulator Reimplementation Write here the description...

Link <https://hack-computer.magiwanders.com>

MANAGEMENT AND LEADERSHIP SKILLS

I lead in tune with emotions When it comes to handling the responsibility of group work, I always try my best to read the room and dynamically lay out plans based on my team's and my own emotions, in order to maximise the quality of the work and the satisfaction of everyone involved.

ORGANISATIONAL SKILLS

I work from first principles I love pulling apart knowledge, understanding its structure down to the fundamentals, enabling deeper understanding and better insight into things I learn, and challenging every assumption stemmed from what I already know.

I strive to see the big picture I recognise that importance of considering the context around ideas and data, as their coexistence is what makes them meaningful. Every day I gain broader trans-disciplinary knowledge across many fields, often beyond engineering, with the hope of deepening my understanding and adapting better to new problems and environments.

I work more to work less I put great effort into permanently automating the resolution of recurrent issues, so that I can constantly reduce the overhead of my work and be more productive.

I tackle challenges methodically I think that scheduling tasks in a correctly prioritised order is the most important part of tackling work successfully, and within time and budget constraints. I pay great attention to detail, after the big strategic issues are solved, and to what tasks can be parallelised, in order to optimise effort.

CREATIVE WORKS

2022

¿Che Verso Fa il Grasino? I have participated as co-writer and keyboardist for the songs of this album from the amateur comedy prog-rock band "Idiofoni", of which I am co-founder in 2014. The album is available on Spotify and all songs are registered at SIAE with percentages proportional to my contributions.

Link <https://open.spotify.com/album/1JtbDcAHuY9M48ExpZY3AU?si=Yg4-ZMU0SU2gDTlyl4RwMw>

2019

Alice and The Wonder OST I have participated as co-writer, keyboardist and recording technician for the album version of the original live theatre soundtrack from "Alice and the Wonder", a derivative theatre show by the "Ginsong" amateur theatre company.

Link <https://www.facebook.com/ginsongmusicals>

COMMUNICATION AND INTERPERSONAL SKILLS

I collaborate openly In both university work groups and volunteering environments I have learned the value of straightforward, focused, goal driven communication, the power of listening and being pro-active.

I value feedback I always welcome and encourage people openly sharing their thoughts on my work, as it is an effective way to constantly challenge my decisions and improve my output.

I build trust through good work Good collaborative work builds trust, not the other way around. Listening and being pro-active, being fair in sharing accountability, encouraging reciprocal teaching are all qualities that minimise people working in the way of others, making a group work well together.

VOLUNTEERING

09/2023 – CURRENT

RISC-V/LFX Mentor (Autumn 2023) Together with Morten Borup Petersen from Microsoft and Keith Graham from Codaip, I coordinated the mentorship **Adding the F Extension to Ripes**.

05/2023 – 08/2023

RISC-V/LFX Mentor (Summer 2023) Together with Keith Graham from Codaip, I coordinated the mentorship **Bringing the "Sliderules" Cheat Sheets to the Web**. The underlying open source project has been originally developed by me and proposed as mentorship to the RISC-V International / Linux Foundation joint mentorship program.

Link <https://sliderules.magiwandanders.com>

08/2022 Rome, Italy

International Workamp Coordinator I coordinated an international camp for the International Civil Service (SCI) at the "Semi di Comunità" C.S.A. (Community Supported Agriculture) farm in Rome, Italy. Task was to stimulate and manage the cooperation between SCI, the host organisation (the CSA) and the international volunteers, be responsible for the coordination of the group's work and conflict management, in addition to sharing all the other volunteer tasks at the farm like weeding, harvesting, transplanting, vegetable maintenance and cultivation techniques, eco-construction, general maintenance of the farm.

07/2019 Yerevan, Armenia

International Volunteer I volunteered through the International Civil Service with HUI association in Yerevan, Armenia for a children rehabilitation hospital. Tasks were construction, general maintenance and support to the doctors performing rehabilitation. HUI is the State Youth Corps of Armenia and is involved with varied activities throughout the entire country.

09/2017 Aldeia Nova, Portugal

International Volunteer I volunteered through the International Civil Service with the Palombar association in Aldeia Nova, Portugal for an archeology project excavating a Roman era olive press. Tasks were mapping and excavating sites of interest, cleaning and organizing findings as well as make geometric measurements for potential new excavation sites. Palombar works for the preservation of the cultural landscape of northeastern Portugal.

02/2019 Banska Stiavnica, Slovakia

International Volunteer I volunteered at Eleuzina Cultural Centre in Banska Stiavnica, Slovakia, participating in the renovation of their main building. Tasks were making and pouring concrete for floors, plastering walls, powersanding and chainsawing wooden beams.

ONLINE COURSES

06/2023 – 07/2023

Science, Technology and Wikipedia PhD Course

The purpose of this PhD Course from the Polytechnic School of Milan was to guide students towards meaningful and high quality contributions to the open knowledge movements/platforms of which Wikipedia is but the most widespread. I contributed on the italian and english pages about Digital Delay Lines, in particular adding their detailed theoretical description.

Link https://en.wikipedia.org/wiki/Digital_delay_line

2020

Build a Modern Computer from First Principles: from Nand to Tetris. Part 1/2

I attended as an auditor on Coursera the famous course by the Hebrew University of Jerusalem authored by Shimon Shoken and Noam Nisan. The course deals with letting the student build piece by piece and abstraction over abstraction a simple, yet complete computer. The journey starts with simple nand gates, and builds circuits, memories, ALU, CPU and the complete processor.

Link <https://www.coursera.org/learn/build-a-computer>

2021

Build a Modern Computer from First Principles: from Nand to Tetris. Part 2/2

I attended as an auditor on Coursera the famous course by the Hebrew University of Jerusalem authored by Shimon Shoken and Noam Nisan. The course deals with letting the student build piece by piece and abstraction over abstraction a simple, yet complete computer. What I built was a virtual machine, compiler and operating system for the computer built for the first part of the course.

Link <https://www.coursera.org/learn/nand2tetris2>

2021

Building a RISC-V CPU Core (LFD111x)

I attended as an auditor on EdX a course about the implementation of a simple RISC-V processor covering a subset of RV32I using Transaction Level Verilog.

Link <https://www.edx.org/course/building-a-risc-v-cpu-core>

2021

RISC-V Toolchain and Compiler Optimization Techniques (LFD113x)

I attended as an auditor on EdX a course covering a basic overview of the development environment around RISC-V, compilers and toolchain.

Link https://www.edx.org/course/risc-v-toolchain-and-compiler-optimization-techniques?utm_medium=partner-marketing&utm_source=affiliate&utm_campaign=linuxfoundation&utm_content=riscvwebsite-lfd113
