



## 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

FEB 2023 – CURRENT Milan, Italy

**HARDWARE DESIGN ENGINEER [PHD] ST MICROELECTRONICS**

## EDUCATION AND TRAINING

DEC 2022 – CURRENT Milano, Italy

**PHD IN INFORMATION ENGINEERING** Politecnico di Milano

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

MAR 2020 – DEC 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, 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, Milano, Italy | **Website** <https://www.polimi.it/>

2016 Monza, Italy

**DIPLOMA DI LICEO CLASSICO** Liceo Classico Bartolomeo Zucchi

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

## ● LANGUAGE SKILLS

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Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
<b>ENGLISH</b>	C2	C2	C1	C1	C2
<b>CHINESE</b>	A1	A2	A1	A1	A1

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

## ● DIGITAL SKILLS

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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

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### ONLINE COURSES

2020

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

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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**

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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)**

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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)**

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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](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)

## PROJECTS

SEP 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.magiwandanders.com](https://idpn.magiwandanders.com)). This is a personal project carried out in partnership with a friend since high school times.

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

JUL 2022 – CURRENT

**SHEAS - Simple Hardware Editor And Simulator**

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

MAR 2021 – NOV 2022

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

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

## NETWORKS AND MEMBERSHIPS

CURRENT

**RISC-V International Individual Member**

## CONFERENCES AND SEMINARS

6 DEC 2021 – 8 DEC 2021 – San Francisco, CA, USA

**RISC-V Summit 2021** I have been sponsored by the RISC-V Foundation, of which I am a member, to attend in person at the RISC-V Summit 2021, a three days event with multiple academic and industry conferences on the topic of RISC-V ecosystem.

Link <https://events.linuxfoundation.org/archive/2021/riscv-summit/>

## VOLUNTEERING

AUG 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.

JUL 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.

SEP 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.

FEB 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.

## 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.

## 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.

## 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.

## 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-ZMU0SU2gDTlyI4RwMw>

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>

## DRIVING LICENCE

**Driving Licence:** B