

# GIOELE BERNARDINI

COMPUTER ENGINEERING MAJOR

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[github.com/gioele-bernardini](https://github.com/gioele-bernardini)

## About Me

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Technical Skills	Assembly x86, C/C++, Rust, Python, Java, Unix/Linux, PostgreSQL
Languages	Very Fluent in English; Conversational Basics in German
Interests	Embedded Systems, Capture The Flag, Electronics

## Work Experience

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### University of Trento

Research Student

Trento, IT (July 2024 – Present)

- Developing a research thesis on AI applied to microcontrollers
- Learning to master Arduino, C++, and approach problems analytically with open discussions, without points of reference. That's making me passionate about low-level computing and eager to work in fields related to Embedded AI

### Various Employers

Cashier, Food Services, and Children's Entertainer

Trento and Moena, IT (Summer 2019 – April 2023)

- Worked periodically in various food service companies, including McDonald's and Coop Italia, as a full-time job during studies to not burden my family, achieve independence, and fully finance my university education myself
- In Summer 2019, Co-facilitated a class at the Kessler Foundation based on the use of LEGO and Arduino, then co-managed one of the most frequented summer camps in my region and successfully ran my own workshop in an extremely stressful and noisy environment that required constant attention

## Competitions and Personal Projects

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### Covid-19, Case Study using R

(February - March 2020)

- By utilizing R, I conducted a comprehensive case study on the demographic impact of COVID-19, resulting in a perfect score for the report and an outstanding course grade
- Driven by a belief in open-source principles, I willingly distributed my final report to all my university peers, establishing it as a central reference point. This endeavor earned accolades from both my peers and the course instructor

### Minecraft-like game using Rust

(September - December 2023)

- Enrolled in one of the most advanced courses, taught by a professor with experience from Stanford, I completed a complex Rust project, resulting in a Minecraft-like 2D game built with Rust and Egui
- This endeavor necessitated collaboration with dozens of individuals, crucial time management to meet deadlines, and a deep understanding of algorithms, data structures, as well as object-oriented programming principles for team cohesion

### Personal Projects on GitHub

- Continuously working on various projects showcased on my [GitHub profile](#)
- Developing a Pong game for the original 8086 in Assembly
- Programming a Multi-Layer Perceptron (MLP) neural network library in C++
- Engaged in other ongoing projects, working on them daily. Feel free to explore them personally on GitHub

## Education

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### University of Trento - Economics and Management

Trento, IT (2019 - 2021)

- Developed quick adaptability and responsiveness to changing environments: transitioned university in response to the challenges posed by the Covid-19 pandemic landscape
- Anticipated graduation in the upcoming years, actively pursuing completion

### University of Trento - Computer and Electronic Engineering

Trento, IT (2021 - Present)

- Anticipated graduation in September 2024
- Many advanced and highly relevant courses attended: FOG Computing and ML among others