

Filippo Fontana

COMPUTER SCIENCE MSc FRESH GRADUATE · SOFTWARE ENGINEER

Modena, Italy

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Summary

Currently a **Computer Science MSc fresh graduate** and a **Researcher** at the University of Modena and Reggio Emilia. In love with **Python**, **Linux** and any challenge that involves **problem solving** and **code writing** in general. Always interested in learning **new technologies** and **tools** if the need arises.

Technical skills

DevOps	Docker, Docker-Compose, GitLab CI/CD
Back-end	Django, PostgreSQL, MongoDB, NginX
Front-end	Hugo, HTML5, CSS3
Programming	Python, C, SQL, JAVA, JavaScript
Languages	Italian (native), English (fluent)

Work Experience

University of Modena and Reggio Emilia

Modena, Italy

RESEARCHER

March. 2023 - Present

- Doing **research** about **memory bandwidth regulation** systems on **RISC-V**.
- Doing **research** on **Static-Partitioning Hypervisors** on **RISC-V**.
- Doing **research** on embedded platforms and RTOSs which support the **RISC-V ISA**.

Minerva Systems S.r.l.

Modena, Italy

EMBEDDED SOFTWARE ENGINEER INTERN

March. 2022 - Dec. 2022

- Did **research** about **memory bandwidth regulation** systems.
- Did **research** on the **RISC-V ISA** and the **NuttX RTOS**.
- **Developed** an implementation of **MemGuard** in **NuttX** for the **CVA6 SoC**.

PyTech S.r.l.

Modena, Italy

FREELANCE BACKEND ENGINEER

Aug. 2021 - Aug. 2022

- **Redesigned** a code base of Python scripts **porting** them to **Python 3** from version 2, making them **consistent** with good **software standards**.
- Implemented a **database interface** with **SQLAlchemy** while keeping the **same performance** of a **low level** SQL adapter.
- Created **educational content** about **Python**, mainly **slides** about **SQLAlchemy**.

TRAME S.r.l.

Modena, Italy

FREELANCE WEB DEVELOPER

Jun. 2019 - Nov. 2019

- Worked for the implementation of a **management software** for a third party firm.
- Developed the product with **JavaScript** as the **back-end** language on **Google Apps Script** platform.
- Managed the **communication** with the stake holders about: **software specifications** and **product feedback**.

Education

University of Modena and Reggio Emilia

Modena, Italy

MASTER'S DEGREE IN COMPUTER SCIENCE

Dec. 2020 - Dec. 2022

- **Thesis title:** Adding Memory Bandwidth Control in a Real-Time Operating System on a RISC-V Platform
- **GPA 4.0:** 4.0

University of Modena and Reggio Emilia

Modena, Italy

BACHELOR'S DEGREE IN COMPUTER SCIENCE

Sep. 2017 - Dec. 2020

- **Thesis title:** Tabular Data Analysis for the UK BioBank: Database-Based VS Script-Based approaches
- **GPA 4.0:** 3.73

Projects

Ghost [GitHub]

DJANGO WEB APPLICATION

- **Web application** which exploited an AI model to **asynchronously convert** audio vocals into text.
- Developed as an ecosystem of **Docker containers** which managed several **synchronous** and **asynchronous** tasks.
- Managed the deployment of the Docker ecosystem on the production server offered by **DigitalOcean**.
- Integrated tools like **Celery**, **Redis**, **PostgreSQL** and **NginX**.

Reservation Ninja [GitHub]

DJANGO WEB APPLICATION

- **Web application** that **automated** the daily classrooms' reservation process of the University of Modena and Reggio Emilia.
- It had **more than 70 registered users**.

Personal Website [filippofontana.eu]

PUBLIC PORTFOLIO OF MY PERSONAL PROJECTS

- The projects are hosted on my **GitLab page**.
- All the **projects**, with a brief description, are **accessible** directly **from my personal website**.
- This site is also planned to be an environment to **keep track** of my **personal** and **professional growth path**.