

Gabriele Volani

Master Student in Computer Science | Software Developer @ Socialit

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Work Experience

Socialit [🔗](#) - Full-stack Developer

October 2024-Present

- Develop **full-stack web applications** taking **ownership** of end-to-end application evolution and using modern technologies and frameworks such as Spring and Angular.
- Collaborate with cross-functional teams and **interact directly with customers** to deliver software within project deadlines, supporting also the successful execution of **EU-based projects**.

Socialit [🔗](#) - Software Developer Intern

March 2024-May 2024

- Contributed to the development of a e-learning **CMS platform**, designing UI mockups, supporting database architecture and implementing authentication services and front-end pages.

Education

Expected 2027

Master Degree in Computer Science - Data Science

University of Trento

Graduated 2024

Bachelor Degree in Computer Science

University of Trento

Competitions and Programs

CyberChallenge.IT

March 2026 - June 2026

- Selected for the CyberChallenge **cybersecurity training program**, completing an intensive hands-on program focused on ethical hacking and secure systems and participating in the **local competition**.

Public AI Challenge

September 2023 - December 2023

- Led** a team in developing a neural network to predict overtourism risks at critical Dolomite passes by integrating traffic, pedestrian and weather data.
- Managed the **end-to-end data science pipeline**, from data collection and preprocessing to feature engineering, model development and validation.

Selected Projects

High-Performance Parallel Numerical Integration [🔗](#)

- Designed and benchmarked **scalable parallel algorithms** for 2D numerical integration on a 7,600+ core HPC cluster, leveraging MPI, OpenMP and hybrid programming techniques to optimize execution.

Blockchain-Based Academic Credential Verification System [🔗](#)

- Developed EduVerify, a **blockchain-based academic credential verification** dApp on Polygon, implementing Solidity smart contracts with multi-signature governance, decentralized storage via IPFS and a React.js frontend integrated with Web3 technologies.

Fault-Tolerant Data Collection Protocol for Wireless Sensor Networks [🔗](#)

- Developed and validated a **fault-tolerant IoT routing protocol** on Contiki OS for wireless sensor networks, implementing recovery mechanisms for node failures and achieving 99% PDR with up to 40x energy savings in real-world environments.

Skills

Languages

Web programming

Parallel programming and ML

Infrastructure

Concepts

Java, Python, C, C++, Solidity, SQL, Typescript, Shell Scripting

Spring Boot, JDBC, Hibernate, Express, NodeJS, Angular

PySpark, OpenMP, MPI, PyTorch

Docker, Kubernetes, Git, Linux, Firebase, PBS Schedulers

Microservices, Blockchain, Distributed Systems, IoT, HPC, Deep Learning