Christian Sassi

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EDUCATION

Master's Degree in Computer Science, Cybersecurity - University of Trento — Trento, Italy
Graduated with a final grade of 110/110 cum laude. — *Sep. 2023 – Dec. 2025*

Bachelor's Degree in Computer Engineering - University of Trento — Trento, Italy
Graduated with a final grade of 108/110. — *Sep. 2020 – Sep. 2023*

EXPERIENCE

Bug Bounty Program Operator — Feb. 2026 – Present
Huawei — *Munich, Germany*
- Engaging in **bug bounty research** on private programs, with a focus on **mobile security**.

Software Developer — Nov. 2024 – Jan. 2026
Energee3 — *Reggio Emilia, Italy*
- Designed a **secure Python backend** to orchestrate authenticated access to multiple external databases via an **encrypted local metadata layer**.
- Built a **custom web-based SQL client** (HTML, CSS, JavaScript) enabling safe query execution with efficient connection management, without external libraries.

Researcher Intern – Cybersecurity — Mar. 2025 – Dec. 2025
Fondazione Bruno Kessler (FBK) — *Trento, Italy*
- Adapted the **DAICS** framework into a **distributed federated learning** pipeline for anomaly detection in **Industrial Control Systems (ICS)**.
- Integrated **adaptive aggregation** and **client selection** from the **FLAD** framework, improving overall training efficiency.
- Evaluated on the **SWaT dataset**, achieving **comparable performance** to the centralized baseline while preserving data privacy.

Software Engineer Intern – Embedded Systems — Feb. 2023 – Jun. 2024
University of Trento — *Trento, Italy*
- Validated **SPARK SR1020 UWB IoT devices** through specification-based testing, ensuring system reliability.
- Optimized **C-based firmware** for real-time **UWB communication**, reducing response time by **50%**.
- Developed **Python analysis tools** to support debugging and performance tuning.

PROJECTS

MITRE Embedded Capture The Flag (eCTF) Competition | *C, Python*
- Placed **13th out of 116 teams** in a national **firmware security competition** hosted by MITRE.
- Developed secure firmware for Satellite TV using **NaCl**, **Blake2b**, **Argon2id**, and **Monocypher**.
- Performed **reverse engineering** and uncovered **more than 30 vulnerabilities** in competitor firmware through targeted analysis.

Security Testing Analysis for an E-commerce Platform | *Java*
- Performed **static and dynamic analysis** with **SpotBugs** and **OWASP ZAP**.
- Identified **more than 15 issues**, including **SQLi**, **XSS**, and **CSRF**, applying structured **vulnerability management**.
- Designed and applied **over 15 targeted fixes** for identified vulnerabilities, improving overall security posture.

PUBLICATIONS

Real-time Musical Haptics with Ultra-wideband: A Study on Latency, Reliability, and Perception
*L. Turchet, **C. Sassi**, D. Vecchia, G. Picco* — Published in IEEE Transactions on Haptics on January 6, 2025.

TECHNICAL SKILLS

Languages: Italian, English
Programming Languages: Python, C/C++, Rust, Java, JavaScript, HTML/CSS, SQL
Security Skills: Injection Attacks, Cryptography, Pwn, Reverse Engineering, Web Security