

Christian Sassi

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EDUCATION

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| Master's Degree in Computer Science, Cybersecurity - University of Trento <i>Expected graduation in December 2025.</i> | Trento, Italy <i>Sep. 2023 – Present</i> |
| Bachelor's Degree in Computer Engineering - University of Trento <i>Graduated with a final grade of 108 out of 110.</i> | Trento, Italy <i>Sep. 2020 – Sep. 2023</i> |

EXPERIENCE

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| Researcher Intern – Cybersecurity <i>Fondazione Bruno Kessler (FBK)</i> | Mar. 2025 – Present <i>Trento, Italy</i> |
| <ul style="list-style-type: none">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 SWaT; achieved comparable performance to the centralized baseline while preserving data privacy.Developed and tested deep learning models using PyTorch, NumPy, and Pandas. | |
| Software Engineer Intern – Embedded Systems <i>University of Trento</i> | Feb. 2023 – Jun. 2024 <i>Trento, Italy</i> |
| <ul style="list-style-type: none">Validated SPARK SR1020 UWB IoT devices through specification-based testing, ensuring system reliability and integration readiness.Optimized C-based firmware for real-time UWB communication, reducing response time by 50%.Developed Python tools to analyze audio packet behavior, improving debugging and performance tuning.Collaborated with a 10-person multidisciplinary team to develop secure and efficient IoT solutions. | |
| Freelance Software Developer <i>Fiverr</i> | Oct. 2022 – Oct. 2023 <i>Remote</i> |
| <ul style="list-style-type: none">Delivered over 60 custom projects in C/C++, Python, and Java, tailored to diverse client requirements.Managed full software lifecycle, maintaining a 100% on-time delivery rate.Maintained a perfect 5.0/5.0 client rating for code quality and communication.Built long-term client relationships, demonstrating strong self-management and technical execution. | |

PROJECTS

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| MITRE Embedded Capture The Flag (eCTF) Competition C, Python |
| <ul style="list-style-type: none">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 |
| <ul style="list-style-type: none">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

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

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