

MIHAI-GEORGE LICU

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EDUCATION

ETH Zurich

Master of Science in Cybersecurity

Zurich, Switzerland

Sep 2024 – Jun 2026

University of Bucharest

Bachelor of Computer Science and Engineering

Bucharest, Romania

Sep 2020 – Jul 2024

WORK EXPERIENCE

CERN | Openlab Summer Intern

European Organization for Nuclear Research

Geneva, Switzerland

Jun 2023 – Sep 2023

- Orchestrated incident response initiatives for a significant hacking incident, leveraging OSINT methods and reverse engineering to dissect attack strategies and gauge breach magnitude resulting in faster identification and mitigation of vulnerabilities.
- Engineered a Python tool for extensive CERN site scans, integrating SSO via Kerberos authentication. Systematically inventoried web technologies, pinpointed vulnerabilities, and initiated security enhancements.

Deutsche Bank | Software Engineer Intern

Multinational investment bank

Bucharest, Romania

Mar 2023 – Aug 2023

- Developed a scalable platform for organizing and tracking employee trainings, streamlining training management for over 1500 employees. Utilized backend Java Spring Boot with JWT authentication for robust security and frontend React for an intuitive user interface, demonstrating full-stack development capabilities.
- Implemented CI/CD to automate the build, test, and deployment process on the cloud. Developed Python microservices for real-time notifications, enhancing user engagement and platform usability.

ETH Zurich | Summer Research Fellow

Swiss Federal Institute of Technology

Zurich, Switzerland

Jul 2022 – Aug 2022

- Crafted exercises, infrastructure, and solutions for a Systems Security curriculum, familiarizing Master's candidates with advanced security methods like sandboxing and fuzzing.
- Conducted comprehensive validation and scalability tests for benchmarks, evaluating the performance and potential of a novel hardware-centric sandbox for WebAssembly utilizing Intel's memory protection keys technology at the kernel level.

PROJECTS

cryptorusticon | Rust

- Developed a Rust library for cryptography, utilizing the num crate for efficient mathematical operations.
- Implemented the Blum Blum Shub pseudorandom number generator and the Solitaire cipher from the Cryptonomicon novel. Integrated comprehensive unit tests, emphasizing code quality, modularity, and maintainability.

Sound Synth | C++, SDL

- Developed a real-time sound synthesizer leveraging digital signal processing (DSP) techniques for audio generation. Implemented a variety of oscillators (e.g., sine, square, sawtooth) and ADSR envelopes to create diverse instrument sounds.
- Employed modern C++ principles, including object-oriented design, for modular and extensible signal processing chains. Utilized SDL for cross-platform capabilities.

SKILLS

Programming Languages: Python, C, Rust, Go, C++

Developer Tools: Linux, Git, IDA Pro, Wireshark, Burp Suite