MIHAI-GEORGE LICU

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EDUCATION

ETH Zurich — Zurich, Switzerland
Master of Science in Cybersecurity — Sep 2024 – Jun 2026

University of Bucharest — Bucharest, Romania
Bachelor of Computer Science and Engineering — Sep 2020 – Jul 2024

WORK EXPERIENCE

CERN | Openlab Summer Intern — Geneva, Switzerland
European Organization for Nuclear Research — 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.
- 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 — Bucharest, Romania
Multinational investment bank — Mar 2023 – Aug 2023

- Developed a platform for organizing and tracking employee trainings, using backend Java Spring Boot with JWT authentication and frontend React.
- Implemented CI/CD to automate the build, test, and deployment process on the cloud and created Python microservices for notifications.

ETH Zurich | Summer Research Fellow — Zurich, Switzerland
Swiss Federal Institute of Technology — 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 and integrated with rigorous unit tests for reliability.

Yuri | Rust, Python

- Created a C2 framework that enables operators to establish and manage reliable communication channels with listening posts, facilitating effective command and control.
- Engineered a secure implant process for establishing reliable communication channels, ensuring optimized control over integrated systems.

SKILLS

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

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