Alexandru Hossu

github.com/ahossu linkedin.com/in/alexandru-hossu

EDUCATION

- TU Delft BSc Computer Science and Engineering; Sept 2025 Present
- Tudor Vianu National High School of Computer Science, Bucharest, Romania; 2021 2025; GPA 9.85/10

WORK EXPERIENCE

Hardware Security Intern

Electron, Romania

April 2025 - August 2025

• Security testing of embedded/IoT devices, reverse engineering, and forensics; Firmware extraction & analysis; Network traffic capture & analysis; Attack simulation.

Research Assistant

UPB, ACS

October 2023 - June 2024

• Researched the **optimal design of Quantum Key Distribution networks**, Quantum Computing Laboratory.

Research Assistant

UPB, ACS

June 2023 - January 2024

- Implemented a tool based on Natural Language Processing as support for **analysis of the polyphonic model**.;
- Published a paper in International Journal of User-System Interaction 16(1), 2023, pp. 11–24: Analysis of Polyphonic Interanimation in Novels, a Support for Understanding Beyond ChatGPT Answers. Authors: Stefan Trausan-Matu, Alexandru Hossu.

Research Assistant

IFIN-HH - ATLAS Experiment, CERN April 2023 - May 2024

• Developed a jet tagging application **using Computer Vision and ML techniques** based on deep convolutional neural networks architecture.

PROJECTS

- Ilm-decompile-cleaner, June 2025
- LLM-powered cleaner for **Ghidra/IDA/Binary Ninja C dumps** to improve pseudo-code read-ability after decompilation.
 - Stack: Python, LLM prompting, parsing.

EXTRACURRICULAR ACTIVITIES

- Founder and Director of High School Artificial Intelligence Club, Sept 2023 June 2025.
- Founder and Director of High School Cybersecurity Club, Sept 2024 Present.
- Founder & developer of **vianuhack.club**; built club CTF platform and created beginner-focused CTF challenges. Founder of "vianu_hack" CTF team ranked 3 on CTFtime, national leaderboard.
- Artificial Intelligence Course, Stanford Pre-Collegiate Summer Institute, 2024
- Data Science and Machine Learning Course, Columbia University, 2024

AWARDS AND CONTESTS

- Qualified for DefCamp CTF Final Stage, 2025.
- 2nd place, UNbreakable Cybersecurity Teams Competition, 2025.
- 1st place, Hardware Hacking Electron Cybersecurity Teams Competition, 2025.
- Member of National Team at the Cybersecurity National Olympiad; 14th place at National Stage, 2024; 13th place at National Stage, 2025.
- 9th place National, Applied Informatics Olympiad (Software Interoperability), 2023.
- FIRST Championship, Houston, World Championship, FTC (Franklin Division), 2022.
- Gold Medal and Think Award, FTC Robotic Competitions, Jamaica National Championship, 2022.

SKILLS

- Programming: C; C++; Python (DS, ML, networking); Java; Rust; Assembly (AT&T syntax); Bash; JavaScript.
- Reverse engineering & exploitation: Binary Analysis; Malware Analysis; Android RE; Windows; Linux.
- Hardware & embedded security: firmware extraction & analysis; reverse engineering; device forensics; bootloader unlocking; PCB tracing; flash dumps.
- Android (security & low-level): Rooting & Bootloader Unlocking; ADB & Fastboot; Magisk; NDK; Frida.
- Web security: Authentication/session testing; Vulnerability discovery; Attack simulation.