Durnea Maxim

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Education

Politehnica University of Bucharest

2023 - 2027

BS in Computer Science

- Relevant Coursework: Data Structures and Algorithms, Operating Systems, Numerical Methods, Linear Algebra, Object-Oriented Programming, Communication Protocols
- o Baccalaureate grade: 9.25/10

Projects

System Logs Anomaly Detector

GitHub 🗹

2024

- o Parsed Windows system logs from PCAP files for anomaly detection.
- Converted PCAP files into structured JSON for machine learning.
- Assisted in neural network optimization and data preprocessing.
- Deployed in an isolated Ubuntu container for efficiency.

Museum App

GitHub 🗹

2024

- o Built a system to manage museum exhibits and automate updates.
- o Developed a CLI tool to process commands and update a database.
- Enabled real-time exhibit updates and user notifications.

SAT Solver with DPLL

GitHub 🗹

2024

- Implemented a CNF SAT solver using DPLL and unit propagation.
- Developed a recursive backtracking algorithm for SAT/UNSAT detection.
- Optimized parsing of CNF formulas in DIMACS format.

Parallel Firewall

GitHub 🗹

2024

- Designed a multi-threaded firewall in C for real-time traffic filtering.
- Used pthreads for concurrent packet processing, reducing latency.
- Optimized detection algorithms for malicious traffic prevention.

Photo Editing Program (C)

GitHub 🗹

2023

- Developed a C-based photo editor with filters, cropping, and rotation.
- o Implemented brightness adjustment and grayscale effects.
- Optimized matrix transformations for image manipulation.

Extracurricular Activities

- Engage in Capture The Flag (CTF) challenges to enhance problem-solving and cybersecurity expertise.
- Actively participate in hackathons, collaborating on innovative solutions and tackling real-world technical challenges.

Skills

Programming Languages: Python, C, Java, Bash, Racket.

Web Development: Familiar with HTML, CSS, and JavaScript, with experience in building interactive web applications.

Tools: Git – Experienced in version control, branching strategies, and collaborative development. Burp Suite, Nmap – Used for penetration testing and network reconnaissance.

Operating Systems: Proficient in using the Linux terminal for system administration, scripting, and security testing.

Languages: English (C1), fluent Romanian and Russian.