Marian-Ionel Stefan

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Summary

M.Sc. student in Intelligent Systems and Computer Vision (SIVA) and QA Automation Engineer, enthusiastic about bridging the gap between Hardware and Software. Hands-on experience in the development of Real-Time Computer Vision Applications (OpenCV, PyTorch) and competitive in the realm of Cyber Security (CTF Winner). Currently applying my analytical background to build and maintain automated testing frameworks for cross-platform applications, looking to tackle complex engineering problems and continuously expand my skill set.

Education

Politehnica University of Bucharest, Faculty of Electronics, Telecommunications and Information Technology — Bucharest, Romania

M.Sc. in Intelligent Systems and Computer Vision (SIVA) — Oct 2026 - Jul 2028

B.Sc. in Applied Electronics *GPA: 8.34* — Oct 2022 - Jul 2026

- **B.Sc. Thesis:** "Real-Time Detection of ADHD-Specific Behaviors from Video using Temporal CNNs" – designed a deep learning pipeline (PyTorch, OpenCV) that classifies short temporal windows of video to flag atypical attention behaviors. Built and labeled a custom dataset (34 subjects, three attention tests) with a purpose-built annotation tool, and validated the system on real-time recordings. Achieved a 9.90 out of 10 on my thesis.

Work Experience

QA DNA — Bucharest, Romania

QA Automation Engineer — Jul 2026 - Present

- Write and maintain automated end-to-end tests for web applications using Playwright.
- Develop mobile automation tests using Detox, and use Android Studio for running environments and debugging.
- Validate backend API endpoints and manage test execution utilizing Postman collections.
- Integrate test suites into CI pipelines and fix the bugs they uncover across frontend and backend.
- Test AI agents using user personas and scenario-based conversations to assess response quality.

Faculty of Electronics, Telecommunications and Information Technology — Bucharest, Romania

Mandatory Internship in Computer Vision — Jun 2025 - Sep 2025

- Developed a real-time facial recognition system on NVIDIA Jetson: face detection and FaceNet embedding extraction with GPU-optimized inference, plus a clustering-based identity management system that automatically groups and labels individuals from live camera streams (Python, OpenCV, Jetson Inference).
- Designed embedding storage and management that avoids redundancy and improves recognition, and built a live camera interface with real-time visualization and detection overlays.
- Containerized the full system with Docker for reproducible deployment and compatibility.

Electronics Students League (LSE) — Bucharest, Romania

Volunteer — Nov 2022 - Present

- Developed strong teamwork and networking skills by volunteering in logistics and IT for large-scale events like LanParty and Robochallenge.
- Coordinated the volunteer team responsible for the Internet network deployment and maintenance across three consecutive editions. (LanParty v25 to v27)

DefCamp & CodeCamp — Bucharest, Romania

Event Volunteer – Logistics — Nov 2025 & May 2026

- Contributed to the logistics of DefCamp (Nov 2025), a major cybersecurity conference, demonstrating initiative and strong engagement with the CyberSec community.
- Logistics volunteer at CodeCamp Bucharest 2026, one of the largest software development conferences in Romania.

Skills

Programming Languages:	C/C++, Python, JavaScript, MATLAB, Verilog, SQL (MySQL), Bash
QA & Automation:	Playwright, Detox, Saga, Postman, Android Studio, CI (GitHub Actions), AI Agent Testing (personas, LLM evaluation)
Frameworks & Web:	React, Vite, Node.js, Flask, JSP, HTML, CSS, WebAssembly, WebGPU, Web Workers, SSR, i18n
ML/AI:	OpenCV, PyTorch, TensorFlow, scikit-learn, ONNX, SciPy, MCP, Transformers.js, MediaPipe, Tesseract OCR
Tools & Platforms:	Docker, Git, Cloudflare Workers, npm, Linux, LaTeX, OrCAD, Arduino, NVIDIA Jetson, Forensics
CS Fundamentals:	OOP, DSA, Design Patterns, DBMS, REST APIs, Computer Networking
Office/Media:	Adobe Premiere Pro, Adobe Photoshop, Office Suite, Autodesk Inventor
Soft Skills:	Team Collaboration, Problem Solving, Agile Mindset, Critical Thinking, Fast Learner
Languages:	Romanian (native), English (advanced), French (beginner)

Projects

app.ionelul.com *React, Vite, WebAssembly, ONNX, Playwright* https://app.ionelul.com
Privacy-first web app with over 50 file tools (PDF, image, video, OCR, CV maker, code IDE) that run entirely in the browser through WebAssembly (FFmpeg, Tesseract, Pyodide, LaTeX) and ONNX models, so no file is ever uploaded. Localized in 14 languages, deployed on Cloudflare, published as an MCP server on npm for AI agents, and covered by 166 Playwright end-to-end tests.

GitHub volunteer contributor *React.js, HTML, Tailwind CSS* https://github.com/ConducereIT
Contributed towards web apps for events that are powered by LSE (Liga Studentilor Electroniști)

Audio Preamplifier PCB Design *OrCAD, PSpice, PCB Editor*
Course project for Fundamental Electronic Circuits: designed and routed a voltage-controlled audio preamplifier from scratch. Managed the full PCB design flow, from schematic capture to board layout, using OrCAD PCB Editor.

Politehnica Forward *Microsoft Office* https://poliforward.upb.ro
The project is an initiative aimed at equipping students with essential digital and entrepreneurial skills for the modern labor market and green economy. Within the business module, I earned a perfect grade (10/10) for developing a complete business plan for a scalable AI-powered security startup. Concurrently, I completed an intensive technical internship focused on Computer Vision. My practical work, detailed internship notebook, and final technical presentation were highly appreciated and recognized with an Honorable Mention.

GitHub portfolio *C/C++, Python, Flask, React, JSP, CSS, HTML* https://github.com/smiromania
Showcasing my transition from learning theoretical concepts to building functional software. This portfolio includes University Projects (Complex assignments from UPB that highlight my understanding of core engineering principles and low-level programming) and Personal Lab (Side projects built out of curiosity, where I learn new frameworks, test ideas, and improve my software architecture skills.)

Awards & Certifications

TechBridge Diploma Telecom Academy
Certifies fundamental networking knowledge (CCNA1 equivalent), covering network architecture, protocols, and basic configurations. Feb 2024

Digital Competences Academia de Echitație, Constanța
Passed with a perfect score, demonstrating advanced proficiency in utilizing modern digital tools and technologies. Oct 2024

1st Place: "Untangle the Spectrum" Electron
Winner of the technical challenge organized by the Electron stand at DefCamp. Nov 2024

1st Place: CTF Electron Electron, Faculty of ETTI
Secured 1st place in the CTF hackathon, showcasing advanced expertise in vulnerability exploitation, applied cryptography, and FPGA systems. Apr 2025