Sîrghe Matei-Ștefan

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Education

University of Bucharest Oct. 2024 - Jul. 2028
BEng Computer Science *Current GPA: 9.56/10.0*
Tudor Vianu National High School of Computer Science Sept. 2020 - Jul. 2024
Computer Science specialization *GPA: 9.41/10.0*
Courses:
Object-Oriented Programming, Data Structures & Algorithms, Discrete Math, Linear Algebra, Calculus, Physics

Experience

University of Bucharest, Faculty of Mathematics and Informatics | *Student Tutor* Oct. 2025 - Present
- Approved by faculty to instruct students in Computer Programming 1 (C) and 2 (C++) for practical exam credit.
- Guided undergraduate students through fundamental syntax, algorithmic design, and data structures.
- Reviewed and debugged student code, providing constructive feedback on logic, memory management, and overall execution efficiency.

Asociația Studenților la Matematică și Informatică | *Design and PR member* Nov. 2024 – Present
- Managed digital asset workflows using DaVinci Resolve, CapCut, Krita, and Photoshop.
- Assisted the technical group with website management, contributing to the user interface (UI).
- Designed PR materials in Canva and analyzed TikTok engagement metrics to iterate on PR strategies(UX).

Projects

Song-Approximation | *Python, Audio Processing, STFT, SVD* Jun. 2025
- Engineered a lossy .wav compression algorithm translating time-domain signals via Short-Time Fourier Transform.
- Reduced matrix dimensionality and storage size using Singular Value Decomposition (SVD) and QR factorization.
- Reconstructed audio via Inverse STFT, calculating cumulative errors.

Find Rakis (Space Simulation) | *C++23, SFML, CMake, OOP, CI/CD* Oct. 2025
- Developed a 2D C++ simulation with custom OOP architecture to handle logic, resources.
- Implemented Perlin noise and dithering and used Integrated GitHub Actions CI/CD for automation.
- Simulated complex 2D space physics, managing gravitational wells, momentum.

ChessHacker (Real-Time Analyzer) | *Python, Playwright, Stockfish, DOM Parsing* Mar. 2025
- Engineered an app utilizing Playwright to dynamically parse live HTML board and evaluate position.
- Integrated the Stockfish engine with adjustable depth levels to analyze parsed positions.

Quantum Logic Gate Simulator | *C++23, SFML, Linear Algebra, Quantum Algorithms* Mar. 2026
- Low-level C++ simulator to model quantum state vectors, execute complex gate operations.
- Rendered complex number matrices visually to demonstrate real-time quantum gate transformations.

Awards

Romanian National Olympiad in Informatics: Bronze Medal (30th, 2017) | Finalist (58th in 2024, 84th in 2022, 55th in 2019)
Aerospace Competitions: Achieved a Top 10 Placement in the Qube2Space International Competition

Skills

Programming Languages: C/C++(8+ years of Competitive Programming), Python, C#, JavaScript, Assembly, SQL
Frameworks & Libraries: Node.js(Multiple Math Visulization websites), Express, Playwright, SFML, Tailwind
Game & Simulation Engines: Godot Engine, Unity Engine(Multiple Unity Game Projects)
Developer Tools & CI/CD: Git/GitHub, CMake, Unix/Linux Shell, GitHub Actions, Docker, MATLAB, AutoCAD
Creative & Media Tools: DaVinci Resolve, Adobe Photoshop, Krita, CapCut, Canva, Figma
Spoken Languages: Romanian (Native), English (C2 Cambridge)