

# Ahmad Arnaoute

Bucharest, Romania

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## SUMMARY

3rd-year Computer Science student at POLITEHNICA Bucharest with strong fundamentals in systems programming, C/C++, Rust, and full-stack software development. Practical experience building low-level utilities, cross-platform applications, and developer tooling. Seeking a software engineering internship to contribute to production codebases and solve hard technical problems.

## EDUCATION

2024–2028 **B.Sc. Computer Science (CTI)**, University Politehnica of Bucharest  
Academic Status: 100% Exam Pass Rate (Integralist) | Current GPA: 8.20  
2020–2024 Baccalaureate Diploma, George Calinescu Theoretical High School, Bucharest  
Specialization: Mathematics and Computer Science

## EXPERIENCE

**Independent Developer – AtodDev** 2023–Present

- Designed and deployed cross-platform apps and native games with modular, maintainable OOP patterns.
- Developed full-stack web and mobile applications with cloud database integration and automated CI/CD.
- Published indie games on itch.io and Google Play, building custom game loops in C++/SDL2 and Java.

## PROJECTS

**Tutoring Platform (Flutter/Dart, Firebase)** [Live Demo](#) | [Repository](#)

- Architected a cross-platform educational app with role-based auth, Firestore sync, and scheduling.
- Built modular state management and reactive UI components for sub-second sync across web and mobile.
- Integrated secure Stripe payment processing and direct student-tutor messaging channels.

**2D Animation Engine (C++, SFML)** [Repository](#)

- Engineered a multi-layered 2D engine with a custom frame timeline, blend modes, and keybindings.
- Built a freehand lasso tool with ray-casting point-in-polygon checks and 2D affine transformations.
- Implemented an undo-redo command pattern and efficient sprite-sheet export routines.

**Ship – Binary Packager & Harvester (Rust, PE/ELF)** [Repository](#)

- Developed a Rust CLI tool parsing PE/ELF headers via `goblin` to automatically bundle dynamic libraries.
- Built autonomous cross-compilation (Linux to Windows MinGW) and an in-memory single-file stub loader.
- Implemented zero-config auto-detection for Cargo, CMake, and Makefiles with cached native toolchains.

**AI PR Reviewer Bot (Node.js, Probot, Gemini API)** [Repository](#)

- Built an event-driven GitHub App with Probot and Gemini Flash for automated PR risk summaries.
- Integrated @mention Q&A triage in comments and token-safe diff truncation heuristics.
- Grouped codebase changesets by directory structure to highlight module impact and architectural changes.

**Automated Video Pipeline (Python, FFmpeg, Team Project)** [Repository](#)

- Co-developed an automated pipeline for multi-track video composition, subtitles, and thumbnail generation.
- Integrated FFmpeg bindings and REST APIs into a batch workflow to eliminate manual post-production steps.
- Orchestrated asynchronous task queues to parallelize media encoding and minimize export latency.

## SKILLS

|                       |                                                                               |
|-----------------------|-------------------------------------------------------------------------------|
| Programming Languages | C, C++, Java, Python, Dart, SQL, Rust, Assembly, HTML, CSS, JavaScript        |
| Frameworks & Tools    | SFML, SDL2, Flutter, Android Studio, Firebase, FastAPI, REST APIs, Git, Linux |
| Core Competencies     | OOP, System Design, Systems Programming, Algorithms, Data Structures          |
| Soft Skills           | Problem Solving, Creativity, Technical Communication, Adaptability, Teamwork  |
| Languages             | English (Advanced), Romanian (Native)                                         |