Cristian Vasilache

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EDUCATION

Faculty of Electronics, Telecommunications, and Information Technology
"Politehnica" University of Bucharest
Expected Graduation: 2024
Specialization: Information Engineering – Bachelor Year 3 – Last year's grade : 8.20

CERTIFICATIONS, LANGUAGES, SKILLS, FAVORITE CLASSES & INTERESTS

- **Certifications:** APTE certified, IEEE - EPS - SBC member, CETTI member.
- **Languages :** Romanian (Native), English (Proficient), French (Novice).
- **Skills :** Teamwork, learning, teaching, and the following domain-specific skills:
  - **Software Engineering:** Metaprogramming, object-oriented programming, data-oriented design, C, C++, C#, Rust, Zig, Linux development, graphics programming, OpenGL, Vulkan, game development, Unity.
  - **Hardware Engineering:** Electronics, digital circuitry design, EDA, KiCAD, OrCAD, CAD, FreeCAD, Autodesk Inventor.
- **Favorite classes :** Digital Integrated Circuitry (CID), Data Structures and Algorithms (SDA), Electronic Interconnection Technologies (TIE), Information Transmission Theory (TTI), Microcontrollers (MC)
- **Interests :** Graphics design, writing, economics, politics, accidentally wiping /boot/efi, 3D printing, breaking the 3D printer, repairing the 3D printer, growing plants, working out, watching videos of bunnies, listening to music (the likes of Billy Talent and old-school nu-metal among other genres), learning new programming concepts, gaming (Warframe and others).

PROJECTS & EXTRACURRICULARS

InfoEducatie **2020 - Present**
"Utility Software" Jury board member

- InfoEducatie is a national contest, recognized by the National Ministry of Education where highschool students come to show off their programming and robotics skills and win prizes accordingly.
- As a member of the jury board for the "Utility Software" category of the contest, I have been required to be objective and impartial in my evaluation of students' projects, having reviewed nearly 50 projects, as well as plan criteria for said evaluation alongside my colleagues.

Zig Compile-Time Interfaces **Present**
Interface system for the Zig programming language

- This project makes compile-time type checking for generics based on interface implementation details and type generation from type reflection possible in Zig with little hassle.

TIE Contest 2022

Won 3rd prize.

- I've designed a 6-layer PCB for a radio-frequency circuit alongisde implementing its schematic in KiCAD, where I have also defined the parts' symbols and the footprints. As a result, I have become APTE certified, a CETTI member, and an IEEE EPS SBC member.

Power Audio-Frequency Amplifier 2022–2023

University hardware engineering project.

- I've designed an audio-frequency power amplifier with a gain of 12, stable and flat with theoretical frequency band of 8Hz–1MHz, but with a realistic one of 10Hz–600kHz. This took place during the first semester of year 3.

C# Club of the National College of "Gh. M. Murgoci" 2016–2020

Member and teacher.

- I was part of the C# club while in highschool. I have led it and taught other students C# during the 2017–2019 period, managing to lead 2 other students to the national stage of the 2018 ITC National Olympiad.

Scientific Creativity National Olympiad 2020

Won 1st prize in the "Applied Sciences" category.
Won 3rd prize across all categories.

- My team and I have won the 1st prize with our research paper titled "Low-frequency electromagnetic radiation effects on the organogenesis of plants".
- My task was to create the electronics behind the measurement system in order to gather the data automatically, process it and create illustrative charts. It was an arduino based approach using common sensors monitoring air humidity, soil humidity, and others inside two boxes, one being a faraday cage, the other being an exposed box, without disturbing the experiment.

InfoEducatie 2018

Won 3rd prize in the "Utility Software" category.

- I've made a 2D top-down shooter with procedural generation in Unity, named "Gravity Shift", whose source I have closed since the contest.

Public Speaking 2018

National semifinals participant.

- I've reached the national semifinals of the contest with my speech titled "We shape our tools. Our tools shape us."

"Adolf Haimovici" Mathematics Olympiad 2018

National-heat participant.

- I've reached the national heat of the national mathematics olympiad "Adolf Haimovici".

ITC National Olympiad 2018

National-heat participant in the C# section.

- I've reached the national heat of the C# section of the national ITC olympiad.