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Profile

As a high school student with an insatiable curiosity and strong convictions, I dive headfirst into every opportunity. From a young age, I've been captivated by the inner workings of Linux, which has given me a personal appreciation for low-level coding. My greatest joy comes from writing C code that's not just efficient but downright practical.

Education

•Mathematics and Informatics Profile *2021-Present*
National High School "Vasile Alecsandri", Galaţi

Voluntary work

•Room At The Inn *June 2020 - August 2023*
Voluntary work at an institution providing lodging for homeless people

- Tools & technologies used: Ignition (Inductive Automation), Microsoft SQL Server
- I have been tasked with making the scripting in the project work, bringing everything to life.
- It was also my first time having clear deadlines and goals set by others.

•Grain Weighing Scale *August 2022*
Industrial control and readout system for a scale

- Tools & technologies used: Ignition (A supervisory control and data acquisition system), RS485 Communication, Raspberry Pi
- Developed a software system for Lemacons, aiding in their successful reach of the second most profitable company in Galaţi
- This system was tasked with storing measurements in a database, and generating statistics and visualizations through an Ignition frontend

•Senior Member of RoSophia#21455 team *December 2022 - Present*
As a part of the programming department

- Tools & technologies used: Java, Kotlin, Android Studio, KiCad
- Through competing in First Tech Challenge I've enhanced my communication skills and quick critical thinking, and also designed and soldered a printed circuit board housing a 2d movement sensor.

•Server Administrator *2019 - Present*
Setting up and maintaining SCADA servers for my local water utility company

- Tools & technologies used: Ignition (Inductive Automation), PostgreSQL, VMware, QEMU, Nginx
- Working with them I've had to set up Ignition and PostgreSQL database servers in both bare metal and virtualised environments.
- At the same time I've also learned how to maximise the uptime of servers through conifguring fallbacks for every system.

•SNMP Ignition Module *May 2020*
A module that enabled snmp (a network diagnostics protocol also used in network routers) communication in Ignition

- Tools & technologies used: Ignition (Inductive Automation), SNMP, Java, Maven
- Writing this helped me learn the basics of networking protocols.
- This module also been used by the ADM company with over 42000 employees.

Personal Projects

•FPGA Signal Analyser *January 2024 - Present*
A digital signal analyser controlled by a field-programmable gate array

- Tools & technologies used: FPGA, Vivado, Verilog to Routing
- This projects facilitates my learning of using tehnology comparable to customisable silicon chips with which I design to eventually power a bionic, mechanised arm.

•Analog Levitator *August 2023 - Present*

A personal electromagnetic levitator for my keys

- Tools & technologies used: Power electronics, Electromagents
- This project not only made me truly understand the magnetism in electromagnetism, but it also opened my eyes to the complexities of analog systems.

•Suijin *October 2021 - Present*

A fully featured 3d renderer including volumetric clouds

- Tools & technologies used: C, OpenGL, Blender
- I created this piece of software ex nihilo, resulting in a new-found appreciation for core computer graphics and 3d modeling in Blender.

•Nixie Clock *January 2022*

A decorative clock based on soviet era nixie tubes

- Tools & technologies used: Breadboards, Arduino, Soldering
- This project sparked my interest in electronics and helped me understand electricity better.

•Iamonalist *June 2020*

Website designed to function as a project managment platform

- Tools & technologies used: Svelte, Javascript, Typescript, Nodejs, Deno, MongoDB, Docker
- Through this I got my start in full stack development as well as with using databases.

•QShop *May 2020*

A shop plugin for Minecraft

- Tools & technologies used: Java, Maven, Git & Github
- My plugin was implemented and successfully facilitated trading in two medium sized Minecraft servers (200 users)

Technical Skills and Interests

Languages: C, modern C++, Python, Java, Kotlin, Verilog, Javascript, Typescript
General purpose: Linux, Git, Github, CMake, Gnu Maketools
Computer graphics: OpenGL, Vulkan, X11, Wayland
Compartimentalisation: VMware, QEMU, VirtualBox, Docker
Databases: PostgreSQL, MongoDB, SQLite, MariaDB, Microsoft SQL Server, Oracle
CAD & CAM: Kicad, Blender, OpenSCAD, EPLAN Electric, OnShape
Electrical skills: Soldering, Design of electrical schematics and PCBs, FPGA Development
Extras: Ignition (Inductive automation), Nginx, Latex, Groff, Vivado, Verilog to Routing
Areas of Interest: Algorithms, Computer graphics, Particle and Nuclear Physics, Astronomy, Mathematics, Linguistics, Engineering, Music

Achievements

•**1st place** at the **national applied informatics** olympiad Acadnet *2024*

•**Division semi-finalists** at the **international robotics** competition First Tech Challenge *2024*

•**Think award 2** at the **international robotics** competition First Tech Challenge *2024*

•**2 time Silver Medal** at the **Romanian informatics** olympiad *2021, 2022*

•**5 time 1st place** at the **Galaţi informatics** olympiad *2018, 2020, 2021, 2022*

•**2nd prize** at the **national physics** contest Mircea Amarine *2020*

•**3nd prize** at the **national physics** contest PHI *2020*

•**Judge's award** at the **national robotics** competition FTC *2020*

•**Honourable mention** at the **national informatics** competition Prosoft@NT *2024*

•**Honourable mention** at the **Galaţi mathematics** olympiad *2021*

•**Honourable mention** at the **Galaţi physics** olympiad *2020*

Languages

Engish	C2	Fluent	**Japanese**	B2	Vocational
Romanian	C2	Native	**Swedish**	B1	Conversational
German	B2	Vocational	**French**	B1	Conversational