Petru Brahă

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EDUCATION

"Alexandru Ioan Cuza" University	Iași, România
Bachelor's degree in Computer Science	*Sep. 2023 – June 2026*
"Mihai Eminescu" High School	Iași, România
Baccalaureate diploma in Mathematics And Computer Science	*Sep. 2018 – June 2022*

PROJECTS

"VDS" - data structures' library | *C++, GoogleTest, OpenGL* — June 2024 – Present

- Created data manipulation programs, resulting in ten complex data structures, by considering an object-oriented approach and the SOLID principles
- Ensured their efficiency, improving their execution time by at least 30%, by applying complexity analysis
- Attained project's portability with 100% of POSIX systems, by using C's standard calls and class templates
- Embraced test-driven development, delivering robustness to the library, by composing varied test cases
- Defined all possible error states, accomplishing competent error handling and developing troubleshooting skills, by employing the standard exceptions and the usage of the debugger
- Achieved version control to track the progress, accepting Git's technology
- Succeeded in drawing a GUI, assuring a simple, clean, visual explanation of the queries for users, by adopting the OOP's design patterns and shaders from OpenGL

"BetterWR" - compression app | *C++, Huffman, Lempel-Ziv-Welch* — Sep. 2023 – Present

- Implemented two powerful data compression algorithms, achieving compatibility in any file system kind, with STL and 'filesystem' library
- Solved the challenge of huge amounts of data, gaining a strong understanding of the core programming concepts, by computing complexity analysis for different approaches
- Reached favorable efficiency of the algorithms, improving compression rate by 20%, by using TAR file-format and fast file reading and writing operations
- Performed a developer console, conceiving a professional UX, by constructing a simple command format
- Forged a GUI, simulating a well-organized file explorer, by designing textures with Photoshop, and practicing an academic tool for drawing
- Managed my team in development, shaping excellent communication, by proving my interpersonal skills, and using Git as a source control system

TECHNICAL SKILLS

Languages: C++, C, Java, SQL, R, Bash, PowerShell, Assembly Language(x86)
Technologies: Git, HTML, CSS
Libraries: GoogleTest, GMock, OpenGL, Standard Template Library