

Ioan Alexandru Popa

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EDUCATION

Politehnica University of Bucharest, **Bachelor in Computer Science**  Oct 2022 - Jul 2026

- Relevant Coursework: Computer programming (**C & Python; Assembly; Rust**), Operating systems usage, Data structures and algorithms, Numerical methods (**Octave**), Applied informatics 2 – information processing (**Matlab**), Object-oriented programming (**Java**), Operating systems
- **Cumulative grades** (1st year): 9.18/10

PROJECTS

emscripten-functions ([GitHub link](#))  Aug 2023 - Oct 2023

- Implemented raw **Rust** bindings for **emscripten** system functions. Emscripten is a compiler toolchain that allows C & C++ code to be ran on web pages using **WASM**. Emscripten is the easiest way of building Rust code for web that depends on C or C++ libraries.
- Built Rust-friendly wrappers for **29** emscripten-specific functions.
- Over **85** downloads on [crates.io](#) for the **emscripten-functions** crate (the Rust-friendly wrappers), and **100** for **emscripten-functions-sys** (the raw Rust bindings).

MyRustRoguelike ([GitHub link](#))  Jul 2022 - Nov 2022

- Built a simple roguelike game in **Rust**, where the player has to descend through the **26** levels of a randomly generated dungeon while dodging various enemies.
- Designed a common back-end, used by **3** different front-ends: ncurses, SDL, and web using **Yew**.

ThemeChanger ([GitHub link](#))  Aug 2021 - Jul 2022

- Designed a Linux app in **Python** and **GTK3** that lets the user modify the mouse cursor, application icon, and widget themes and settings of **4** theme frameworks: GTK2, GTK3, GTK4, Kvantum.
- Implemented live theme reloading using **6** desktop environment-specific mechanisms.
- Built a mechanism of showing instantly GTK3 theme and CSS changes in the app.

SKILLS

- **Intermediate:** C, C++, Linux & shell scripting, Python, Rust, TypeScript
- **Basic:** CSS, C#, Emscripten, F#, Git, Go, Godot Engine, GTK3, HTML, Java, \LaTeX , Lua, Matlab/Octave, React, SQL, Svelte, x86 Assembly

EXTRACURRICULAR ACTIVITIES

Security Summer School, binary track  Jun 2023 - Jul 2023

- Attended lectures and solved exercises about finding and exploiting common executable vulnerabilities.
- Took part in 2 team-based Capture the Flag events where given executables had to be exploited to find a hidden “flag”.

VOLUNTEER ACTIVITIES

Rust workshop 2023, desktop applications track  Apr 2023

- Taught **2** students over a weekend the basics of desktop application development using **Tauri**.