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 **195** downloads on `crates.io` for the `emscripten-functions` crate (the Rust-friendly wrappers), and over **245** 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 procedurally 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.

OPEN SOURCE CONTRIBUTIONS

- Implemented the option to hide the "mentions" tab in the Tiny IRC client.
- Enhanced the tests suite of Lemmy and `rust-vmm/kvm-ioctls`.
- Added an SVG map with the Romanian counties to `VictorCazanave/svg-maps`.
- Fixed typos in OpenTTD and Unikraft.

SKILLS

- **Intermediate**: C, C++, JavaScript, 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

VOLUNTEER ACTIVITIES

Rust workshop December 2023, CLI applications track 📅 Dec 2023

- Helped teach **29** students over a weekend the basics of **Rust** programming and CLI app development.