

# Ioan Alexandru Popa

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## EDUCATION

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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**), Object-oriented programming (**Java**), Operating systems, Algorithm design, Communication protocols, Local computer networks
- **Cumulative grades:** 9.39/10

## PROJECTS

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**emscripten-functions** ([GitHub link](#))  Aug 2023 - Sep 2024

- 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 **2500** downloads on [crates.io](#) for the [emscripten-functions](#) crate (the Rust-friendly wrappers), and over **2300** for [emscripten-functions-sys](#) (the raw Rust bindings).

**Personal dotfiles management system** ([GitHub link](#))  Mar 2021 - Sep 2024

- Created a GitHub repository with my configuration files for select programs I use, like **vim**, **zsh**, VSCode.
- Implemented **shell scripts** for **5** distro families that install some apps that I like and configure a freshly installed **Linux** system the way I like it, and a **Windows** script that does this too.

**ThemeChanger** ([GitHub link](#))  Aug 2021 - Jul 2024

- 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, even for unthemable libadwaita apps.
- Implemented live theme reloading using **6** desktop environment-specific mechanisms.
- Built a mechanism of showing instantly GTK3 theme and CSS changes in the app.

**Proportional election methods simulation** ([GitHub link](#))  Jan 2021


- Implemented a **Svelte** web app that can simulate **4** proportional election apportionment methods.

## EXTRACURRICULAR ACTIVITIES

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**Undergraduate teaching assistant**, Assembly programming  Feb 2024 - Present

- Held a weekly laboratory session for over **10** students that shows them the basics of **x86 Assembly**.
- Made a **Docker** image for lecture demos.

**Rust workshop April 2024**, desktop applications track  Apr 2024

- Taught **4** students over a Saturday day the basics of desktop application development using **Tauri**.

## SKILLS

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