

# 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, Programming paradigms, Algorithm design, Communication protocols
- **Cumulative grades** (1st year): 9.18/10

## PROJECTS

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**emscripten-functions** ([GitHub link](#))  Aug 2023 - Jul 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 **960** downloads on **crates.io** for the **emscripten-functions** crate (the Rust-friendly wrappers), and over **885** for **emscripten-functions-sys** (the raw Rust bindings).

**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.

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

**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**.
- Built 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**.

## OPEN SOURCE CONTRIBUTIONS

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- Enhanced the tests suite of Lemmy and **rust-vmm/kvm-ioctls**.  Jan 2024
- Implemented the option to hide the “mentions” tab in the Tiny IRC client.  Jan 2023
- Added my ThemeChanger application to nixpkgs.  Oct 2021 - Jul 2022