

Ramil Carlos Ranara

2nd Year CS · Systems & Low-Level Development · Rust, C · De La Salle University

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PROFILE

Second-year CS student specializing in systems and low-level development. Builds kernels, language runtimes, and games outside of coursework primarily in Rust and C. Has shipped packaged software to both the Arch User Repository and Fedora COPR.

PROJECTS

CarlOS Rust x86_64 QEMU github.com/Floranaras/CarlOS

Bare-metal x86_64 kernel in Rust with no standard library. Custom IDT, VGA text-mode driver with scrollback, PS/2 keyboard decoding, PIC remapping, and a BASIC interpreter with variables, arrays, loops, and GOTO all behind a shell on a spin-lock event loop.

Python Interpreter C Lexer Parser AST github.com/Floranaras/Python-Interpreter

Interpreter pipeline in C with no third-party libraries: hand-written lexer with INDENT/DEDENT emission, recursive-descent parser producing a 14-node typed AST, and a tree-walking evaluator with functions, recursion, dynamic scoping, loops, and a call-depth guard.

SokoBot C JNI GBFS github.com/Floranaras/SokoBot

Sokoban solver as a native Java library via JNI. GBFS with Zobrist-hashed state deduplication and Manhattan distance heuristic. Prunes dead states via pull-reachability BFS, 2x2 cluster detection, frozen-box analysis, and 4-rotation pattern matching.

Rust Tetris Rust Macroquad github.com/Floranaras/rust-tetris

Game Boy-styled Tetris in Rust using Macroquad. 7-bag randomizer, ghost piece, hard/soft drop, level scaling, and a layered GB LCD palette renderer. Dual-target crate exposing a binary and a cdylib.

Valentine's Day TUI Rust Ratatui github.com/Floranaras/funnyvalentine

Terminal UI with a physics-based particle system, procedural starfield, and big-pixel text via tui-big-text. Published on both the Arch User Repository (AUR) and Fedora COPR.

SKILLS

Languages	Rust, C, Java, TypeScript, Python, Lua, Shell
Systems	OS internals, kernel development, memory management, x86_64, interrupt handling
Concepts	Interpreter design, AST evaluation, heuristic search, TUI rendering, concurrency
Web	TypeScript, React, HTML, CSS, Tailwind
Tools	Git, Linux, Neovim, Typst

EDUCATION

Bachelor of Science in Computer Science 2024 – Present

Major in Software Technology · De La Salle University, Philippines

LANGUAGES

English Native Filipino Fluent

