Nobu Shimazu

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Systems and programming-languages developer focused on language design, virtual machines, runtimes, and developer tooling—author of a published Rust crate and a cross-platform language interpreter.

EDUCATION

University of Washington — Seattle, WA Expected 2029

B.S. in Computer Science (intended, Paul G. Allen School) · Mathematics

Relevant Coursework: CSE 122–123 (Programming & Data Structures), MATH 208 (Linear Algebra), MATH 124–125 (Calculus)

EXPERIENCE

Mazu Bay — Co-founder & Engineer 2026–Present

Independent two-person game studio — Godot 4 / GDScript

- Co-founded the studio and lead all engine and gameplay programming.
- Engineered core systems in Godot 4: a combat state machine, modular weapon system, and reusable hitbox/hurtbox component architecture, and behavior-tree enemy AI (LimboAI).
- Designed mechanics and architecture for two in-development titles—a first-person Soulslike boss-rush and a 2D precision-action Metroidvania.

Daedalus Robotics — Software Engineer 2022–2024

- Software engineer on a two-time national-champion team in the Bell Advanced Vertical Robotics (AVR) competition.
- Built autonomy software, flight controls, and simple computer-vision pipelines for an autonomous quadcopter in a ROS 2-based stack.

PROJECTS

SLAP — Programming language & interpreter

- Built a tree-walking interpreter for a dynamically- and strongly-typed, object-oriented language with C-family syntax (implemented in Nim).
- Configured simple cross-platform CI (Linux / macOS / Windows) and documentation; building a SLAP-to-JavaScript transpiler.

Tamago — Open-source Rust library

- Authored and published a Rust library to crates.io (~1,000 downloads) that programmatically emits formatted, compilable C through a typed builder API.

Darcie — Bytecode virtual machine

- Built a bytecode virtual machine in C for a dynamically-typed language, with first-class closures and an integrated garbage collector.
- Implemented a primitive C foreign-function interface (FFI) for calling native code from the language.

FLan — Functional-language runtime

- Implemented a generational garbage collector in C for an experimental functional language, automating memory reclamation across object generations.

Crave — Native desktop application

- Building a native macOS recipe manager in C — clay immediate-mode UI, Raylib rendering, SQLite storage—structured with The Elm Architecture (TEA) across a modular, multi-file codebase.

Additional: rayanim, a Manim-inspired animation engine in C / raylib (github.com/bichanna/rayanim); and a prototype bytecode VM in C++.

TECHNICAL SKILLS

Languages: C, Rust, Java, Go, Python

Tools & Technologies: Git, ROS 2, SQLite, Raylib, clay, Godot 4, Django, Meson/Ninja

Spoken Languages: Japanese (native), English (fluent), Vietnamese (conversational)