

Raul Cardenas Montoya

AI Engineering Student | Agentic Systems, ML Infrastructure, Rust

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Summary

Undergraduate engineer who ships infrastructure for agentic systems, synthetic-data pipelines, and model evaluation. Author of 11 published Rust crates (neuromod: 2,000+ downloads) and 60 public Hugging Face datasets. Merged contributor to externally maintained open-source projects.

Open-Source Contributions

agent-afk ([PR #1019](#), [PR #1242](#), merged)

- Implemented the xAI/Grok provider: API-key and OAuth authentication, provider selection, and credential handling.
- Fixed OAuth compatibility and added dependency-injection seams so the provider layer is testable without live credentials.

UsagePal ([PR #48](#), PR #56, merged)

- Added Linux support and Devin usage tracking backed by a CLI and SQLite, with credential discovery from the environment.
- Added a Fedora validation path exercising real-token behavior.

Selected Projects

Published Rust crates (crates.io/users/rmems)

- 11 crates: neuromod, nir-rs, axon-encoder, kinetic-signals, engram-parser, silicon-bridge, myelin-accelerator, synaptic-wiring, plasticity-lab, limbic-critic, corpus-ipc. neuromod has 2,000+ downloads and nir-rs 1,000+.
- silicon-bridge exports Q8.8 fixed-point weights for FPGA targets; myelin-accelerator provides CUDA kernels for Blackwell (sm_120); engram-parser validates GGUF layouts and extracts individual tensors.

synthetic-factory (github.com/rmems/synthetic-factory)

- Built a synthetic-data platform with a reviewed generator registry, fail-closed rights provenance (unknown provenance resolves to blocked), deterministic curation, and strict audit and export gates.
- Designed oracle-grounded generation: deterministic simulators measure what a generator proposes, and every record replays from (pack, seed, actions).
- Published 60 datasets across 4 Hugging Face collections, all with append-only raw evidence and declared licensing.

agoge-forged (github.com/rmems/agoge-forged)

- Local-first post-training harness (LoRA/QLoRA) with immutable manifests, split-integrity checks, and leakage detection.

Limen-Neural / Spikenaut-SNN (github.com/Limen-Neural)

- Leads a 10-crate Rust neuromorphic stack: spiking-neuron dynamics, sensory encoding, NIR interchange, Q8.8 FPGA export, and CUDA acceleration primitives.
- Shipped Spikenaut-SNN on Hugging Face: a 16-neuron LIF network with telemetry-driven artifacts and an export contract targeting a Xilinx Artix-7 FPGA.

Technical Skills

Languages: Rust, Python, Julia, CUDA C/C++, shell

ML: PyTorch, Hugging Face, LoRA/QLoRA, quantization, GGUF/Safetensors, MoE, evaluation harnesses, synthetic-data generation and curation

Systems: Linux (Fedora), Docker, GitHub Actions, self-hosted CI, git worktrees, JSONL/Parquet pipelines

Education

B.S. in Artificial Intelligence Engineering, Western Governors University, expected September 2027

Prior coursework in Electrical Engineering, Texas State University, and Computer Science at Concordia Texas University and Austin Community College for Business