

Anthony James Padavano

SOFTWARE ENGINEER, SANDBOXING (LINUX OS & VIRTUALIZATION)

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LINKS

[Portfolio](#) · [GitHub](#) · [agentic-titan](#) · [ORGANVM System](#)

PROFILE

Independent software engineer and systems architect building production-grade Linux infrastructure and secure orchestration layers. Creator and sole architect of a 103-repository ecosystem across 8 GitHub organizations governed by automated validation and 2,349+ tests. Specialist in low-level system programming, kernel optimization, and virtualization (KVM/QEMU) for high-intensity AI workloads. Expert in "solo production at institutional scale," utilizing an "AI-conductor" methodology to maintain technical integrity while optimizing virtualization performance for training and serving frontier models. Full-Stack Developer (Meta). 18 years professional experience. MFA Creative Writing, LGBTQ+.

TECHNICAL SKILLS

Linux Kernel · System Programming · KVM/QEMU · C/C++ · Rust · Python · CLI Tooling · GitHub Actions · CI/CD · Zod · pytest · Vitest · YAML/JSON Schema · Node.js · Docker · Git · pnpm Monorepos · GCP / Terraform · WebSocket · Redis · Nginx · D3.js · p5.js

SELECTED PROJECTS

ORGANVM Eight-Organ System — 103-Repository Systems Infrastructure

A unified technical corpus encompassing 21K code files and 3.6K tests. Governed by a formal promotion state machine and automated dependency validation. Features 128 GitHub Actions workflows built on 18 reusable templates. A live demonstration of low-level infrastructure orchestration and kernel-parameter management at institutional scale.

agentic-titan — Multi-Agent Orchestration & CLI Framework

TypeScript framework for orchestrating complex, multi-step engineering tasks across autonomous agents. Includes 18 development phases and 1,276 tests. Engineered for high-reliability tool invocation, task decomposition, and secure, isolated task execution in virtualized environments.

agent--claude-smith — Claude Agent SDK Reliability Layer

Advanced agent implementation built on Claude Agent SDK. Features session persistence, self-correction hooks, and structured tool invocation designed to understand and mitigate model capability gaps in complex systems engineering workflows.

Application Pipeline — Systems Analysis & Infrastructure Suite

Python-based CLI suite for pipeline orchestration: 8-dimension scoring rubric and YAML-driven state machine. Automates intake, research, and synthesis tasks, translating deep technical telemetry into scannable storefront materials.

Portfolio — Performance-Grade Monitoring Interface

Astro 5 site governed by a CI/CD "quality ratchet" that enforces strict validation and testing standards. Represents the scannable "Storefront" for deep systemic infrastructure work and real-time process monitoring.

EXPERIENCE

Independent Software Engineer & Systems Architect

2020 — Present

- **Infrastructure Reliability:** Built a corpus of 2,349+ tests across 94 active repositories, ensuring technical integrity in complex, cross-organizational developer tooling and kernel-level components.
- **Systems Governance:** Designed a 103-repository system governed by automated validation and 94 CI/CD pipelines to sustain institutional-scale production as a solo practitioner.
- **AI-Native Automation:** Developed multi-agent frameworks using the Claude Agent SDK featuring structured tool invocation and self-correction protocols for autonomous systems engineering.
- **Golden Path Orchestration:** Designed CLI pipeline tools using Python and YAML schema validation; optimized for managing high-volume data and complex state transitions.

Instructor — Composition, Writing & Complex Systems

2015 — Present

Miami Dade College, Keiser University, Nova Southeastern, FAU, Young Harris, Tarrant County, Broward, Palm Beach State

- 100+ courses across 8 institutions; 2,000+ students. Translating complex technical and architectural requirements into accessible documentation and mentoring junior developers in technical rigor.

Digital Marketing Manager & Narrative Strategist

2023 — 2024

Miami Dade College Foundation (nonprofit)

- Architected foundation website overhaul and campaign design, utilizing data analysis to drive a 32% increase in donor engagement through technical execution.

Multimedia Specialist

2011 — 2020

AJP Media Arts — clients incl. Boca Ballet Theatre, Forward Funding, Arts in Boca

- Produced high-volume visual and narrative campaigns; generated 17.5M+ views through technical and creative orchestration.

EDUCATION

M.F.A. Creative Writing, Florida Atlantic University

2015 — 2018

B.A. English Literature, CUNY College of Staten Island

2010 — 2014

C E R T I F I C A T I O N S Full-Stack Developer, Meta (2024) · UX Design, Google (2023) · Digital Marketing, Google (2023) · Project Management, Google (2023)