

Anthony James Padavano

STAFF SOFTWARE ENGINEER, AI AGENTIC SEARCH

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LINKS

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

PROFILE

Independent engineer and systems architect building production-grade infrastructure, multi-agent orchestration frameworks, and context-management systems in TypeScript and Python. Architect of a 103-repository ecosystem governed by automated validation, 94 CI/CD pipelines, and 2,349+ tests. Specialist in architecting "Agentic Search" infrastructures that translate deep "Cathedral" corpuses into high-signal "Storefront" insights. Focused on systemic reliability, correctness, and building the "operating system" for human-agent collaboration at institutional scale. Full-Stack Developer (Meta). 18 years professional experience. LGBTQ+.

TECHNICAL SKILLS

TypeScript · Python · AI Search · Vector Databases · Claude Agent SDK · CLI Tooling · GitHub Actions · CI/CD · Zod · pytest · Vitest · YAML/JSON Schema · Node.js · Docker · Git · React 18 · pnpm Monorepos · GCP / Terraform · WebSocket · Redis · Nginx · D3.js · p5.js

SELECTED PROJECTS

agentic-titan — Multi-Agent Orchestration & CLI Framework

TypeScript framework for orchestrating complex, multi-step engineering and research tasks across autonomous agents. Includes 18 development phases and 1,276 tests. Engineered for high-reliability tool invocation, task decomposition, and parallel context processing.

ORGANVM Eight-Organ System — 103-Repository Knowledge Infrastructure

A unified technical corpus encompassing 21K code files and 3.6K tests across 8 organizations. Governed by a formal promotion state machine and automated dependency validation (43 edges). Features 128 GitHub Actions workflows. A live demonstration of connected intelligence and solo production at institutional scale.

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 navigate and interpret complex, multi-repo knowledge bases.

Application Pipeline — Systems Analysis Tooling 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 evidence into scannable storefront materials.

Classroom RPG Aetheria — AI-Native Learning Environment

Gamified education platform featuring dynamic AI quest generation. Hardened for production with XSS mitigation, robust failure handling, and 100% pass rate across 45+ unit tests (Vitest). A prototype for frontier pedagogical environments.

EXPERIENCE

Independent Software Engineer & Systems Architect

2020 – Present

- **Infrastructure Reliability:** Built a corpus of 2,349+ tests across 94 active repositories, ensuring correctness in complex, cross-organizational developer tooling and knowledge systems.
- **Agentic Search & Context:** Designed CLI tools for automated research and content synthesis using Python and YAML schema validation; optimized for managing high-context density across fragmented data sources.
- **AI-Native Automation:** Developed multi-agent frameworks using the Claude Agent SDK featuring structured tool invocation and self-correction protocols for autonomous engineering.
- **Governance at Scale:** Orchestrated 128 GitHub Actions workflows using 18 reusable templates to maintain production reliability across 8 independent organizations.

Instructor — 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 architectural requirements into accessible documentation and mentoring junior engineers in technical rigor.

Digital Marketing Manager

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.

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 and \$2M in fundraising through technical and creative production.

EDUCATION

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

2015 – 2018

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

2010 – 2014

CERTIFICATIONS

Full-Stack Developer, Meta (2024) · UX Design, Google (2023) · Digital Marketing, Google (2023) · Project Management, Google (2023)