

# Anthony James Padavano

SENIOR+ SOFTWARE ENGINEER (RESEARCH TOOLS & PROTOTYPING)

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## LINKS

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

## PROFILE

Independent full-stack engineer and "0→1" builder building production-grade research tools, multi-agent orchestration systems, and interactive visualization platforms. Creator and sole architect of a 103-repository ecosystem across 8 GitHub organizations governed by automated validation, 94 CI/CD pipelines, and 2,349+ tests. Specialist in translating complex research workflows into high-signal "Storefront" applications that multiply technical productivity. Expert in React, Python, and utilizing an "AI-conductor" methodology to rapidly prototype and iterate on tools that researchers love. Full-Stack Developer (Meta). 18 years professional experience. MFA Creative Writing. LGBTQ+.

## TECHNICAL SKILLS

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

## SELECTED PROJECTS

### Application Pipeline — Systems Analysis & Research Tooling Suite

Full-stack suite for pipeline orchestration: React frontend, Python CLI tools, Greenhouse API integration, and YAML-driven state machine. Automates complex intake, research, and synthesis tasks, translating deep technical evidence into scannable storefront materials for technical users.

### Portfolio — Performance-Grade Static Site & Visualization Showcase

Astro 5 site governed by a CI/CD "quality ratchet" that enforces strict validation and testing standards. Features generative p5.js visual layers and D3.js data visualizations. Represents the scannable "Storefront" for 42 published technical essays documented as part of the public research process.

### 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 delightful developer abstractions.

### Classroom RPG Aetheria — AI-Native Learning Environment

Gamified education platform featuring dynamic AI quest generation. Hardened for production with XSS mitigation and robust failure handling. A prototype for making complex AI integrations resilient and well-documented for practitioners.

### ORGANVM Eight-Organ System — 103-Repository Developer 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 how institutional-scale full-stack foundations can be orchestrated by a solo practitioner.

## EXPERIENCE

### Independent Software Engineer & Research Tool 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 research applications.
- **Full-Stack Orchestration:** Designed a 103-repository system governed by automated validation and 94 CI/CD pipelines; treating institutional-scale tool foundations as a solo exercise in technical vision.
- **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 built on 18 reusable templates to maintain production reliability and minimize architectural friction across 8 organizations.

### 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 technical users in 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 and visual 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

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