David wizzense

Platform Engineer. Founder & Architect, Aitherium / AitherOS. USAF veteran.

The Reverse Engineer Ninja (REN): take any system apart once, and the factory rebuilds it a thousand times.

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SUMMARY

I run a software factory, not a backlog. Over 15 months I built AitherOS — an AI-native operating platform where 48 specialised agents plan, code, review, audit, deploy and write about their own work — and used it to land 32,798 commits and 5,769 merged pull requests, 1,231 self-testing quality gates, 1,840 live MCP tools and 337 published posts, most of it authored and shipped by agents under programmatic governance I designed. Before that: 12 years racking, securing and automating enterprise infrastructure, including the second-largest Active Directory on earth for the US Air Force. I have scars from every layer of the stack and a documented, measured opinion about how autonomous systems fail. Platform engineering — orchestration, governance, memory, evaluation, self-healing, ship — is the job I have been doing, in the open, every day.

32,798	5,769	1,231	1,840	48	337
COMMITS	MERGED PRS	SELF-TESTING GATES	MCP TOOLS LIVE	AGENTS	POSTS PUBLISHED

SINCE SEPTEMBER 20 · 2,357 MERGED PRS, 746 FEATURES

Device management for the whole house. Enrolment, inventory, policy, signed remote commands, revocation and pushed updates for Android, Windows and Linux. One app per platform — the Aither PWA, a sideloaded Android app with its own signed update channel, the awdesk desktop app — with Aither Learn, a classroom bridge and Hearth on top.

An agent art director with a film pipeline. Iris writes the treatment, generates key art on ComfyUI and critiques it with a vision model; a custom voice trained on rented GPUs speaks the narration; one CLI takes a brief to a 16:9 and a 9:16 cut with the voice verified word by word.

Governance that keeps up. 1,144 self-testing gates (184 more than on Sep 20). Tonight's example — a fleet URL using the wrong scheme fails quietly, so TLS001 now checks every one against the service registry; its first run found and fixed five live.

Every device is compute. Phones and spare machines lend memory to the platform's models over a device-signed relay and hold the oldest part of a model's context with exact attention results; DeepSeek V4 Flash runs pooled across an RTX 5090 and a DGX Spark; Bonsai runs on-device in a phone browser over WebGPU.

Commerce rails and a training game. shop.aitherium.com with downloads and refunds; agent-to-agent USDC payments over x402; Dark Matters, where protagonist, neutral and antagonist agents pursue their own goals and their decisions become training data.

EXPERIENCE

Aitherium — Founder, Architect (AitherOS, the aw* stack, awnix) Jul 2025 - Present

- Architected AitherOS: 395 declared services across 12 layers, run as podman quadlets on Rocky/Debian, with Postgres replication, Redis Sentinel, Cloudflare tunnels, and GPU scheduling across local, DGX and rented (Lambda, Vast, Hetzner, AWS) capacity.
- Built the aw* (Aither World) family: 91 registered bricks, 55 public, composed into 27 stacks. awnix is an immutable Linux you can hand to an agent; awdk builds agent fleets in three lines; awgit is op-log-aware git for many agents in one tree; awgraph, awm, awrelay, awiam, awbac, awseal, awdit cover code graph, memory, messaging, identity, RBAC, signing and audit. 51 on PyPI.
- Governance as code: 1,231 self-testing gates, a per-gate lane manifest (CHK001-006) that asserts 100% coverage and refuses a gate that runs nowhere, and a debt-ledger protocol where a detectable defect must become a check. Measured the ledger at 79 rows/day in vs 4.2/day out before the rule; it stopped being a write-only archive after.
- 32,798 commits and 5,769 merged pull requests since June 2025 (18,898 commits in the last 90 days; 2,357 PRs, 746 of them features, between Sep 20 and Oct 5 alone), 45,816 tracked files, 337 blog posts, 256 scheduled routines - the majority authored by agents under those gates, with every claim required to carry its command and exit code.
- Trained and shipped models: a code-search embedder 13x smaller than its teacher that beats it (recall measured on the platform's own corpus); Gemma-4 and orchestrator fine-tunes with a positive-baseline rule (a trainer must beat a named baseline or it is not a result); Bonsai 1.7B running in-browser on a phone.
- Security posture designed fail-closed: authz gates deny on every non-happy path, no caller-supplied tenant ids in a decision, dual-key rotation of the fleet credential across 43 verifier sites, secrets vault with audit round-trip asserted by a gate.
- Sold and operated real tenants: J Games & Repair, Digital Ground Game, Garg - each a generated repo, appliance image, brain pack and portal the customer owns.

Tanium — Senior Enterprise Services Engineer (prev. Escalation Engineer, Senior TAM, ESE) Jan 2022 - Present

- Platform SME on the hardest escalations for enterprise and federal endpoint-management customers; 195 cases in six months at 100% CSAT.

- Rewrote the Tanium Risk Assessment tooling in Python to scale from 500 to unbounded endpoints; applied to a 50,000-endpoint environment.
- Built Client Health dashboards and automation moving customers toward a self-healing endpoint estate; authored the guide and ran the live webinar (hundreds of attendees).
- Fully automated a home lab through Tanium + PowerShell + Python as a self-managing environment - the seed of AitherOS.
- 2x Star Performer award (2024).

Boeing — HPC Linux System Engineer Apr 2020 - Jan 2022

- Owned the enterprise tape archive (Oracle HSM / SAM-QFS -> Versity Storage Manager as technical lead) and a fibre-channel SAN for HPC.
- Wrote Python automation for recovery, monitoring and archival; led LTO6 -> LTO8 migration and data-at-rest encryption (OKM 3, IBM SKLM).

United States Air Force - Cyber Systems Operations — Enterprise Active Directory Engineer, Functional Lead, Supervisor Directory Services Ops Jan 2014 - Jan 2020

- Led Tier-2 operations for a $10B, 850,000-user, 690-domain-controller, 230-site Active Directory - the second-largest AD network in the world - including classified and unclassified GAL/Exchange services 24/7.
- Automated DC maintenance and health checks for 70+ domain controllers in PowerShell; performed an authoritative ADDS restore recovering 3,000 accounts with zero collateral impact.
- Identified a training gap, wrote the ADDS troubleshooting curriculum, and trained 357 technicians across four organisations.
- Red Flag 17-1 blue-team operator, Superior Performer; Junior Technician of the Year 2017; Information Dominance award 2018; promoted SSgt in the 94th percentile.

SKILLS

Agentic systems: multi-agent orchestration, MCP (1,800+ tools served), tool-calling harnesses, agent memory and knowledge graphs, evaluation harnesses, ratchet/keep-revert loops, prompt and context engineering, on-device inference (WebGPU/wasm)
Models and training: vLLM, llama.cpp, LoRA/fine-tuning, embedding distillation, KV-cache quantisation, GPU scheduling, DeepSeek/Qwen/Gemma/Bonsai
Languages: Python, TypeScript/Node, PowerShell, Bash, SQL
Platform: PostgreSQL (replication), Redis Sentinel, Podman/Docker, systemd quadlets, k3s, Next.js/React, FastAPI, Cloudflare (Workers, Tunnels, Pages), GitHub Actions self-hosted fleets, OpenTofu
Cloud and hardware: AWS, Lambda, Vast, Hetzner, NVIDIA DGX Spark, RTX 5090, WSL2
Ops discipline: fail-closed authz, secret rotation, observability-to-action loops, incident root-cause, tape/SAN/HPC storage, Windows and Linux at 850K-user scale

CERTIFICATIONS

Tanium Certified Professional - Endpoint Management (2024-2026) · Tanium Certified Operator (2022-2026) · GIAC Certified Windows Security Administrator (GCWN) · GIAC Certified Enterprise Defender (GCED) · CompTIA Security+

Every number above was measured on the AitherOS tree; the command behind each is in github.com/wizzense/wizzense.github.io/facts/measured.md.