

David Frey

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SENIOR / STAFF AI ENGINEER

Senior / Staff AI Engineer with 15+ years building reliable production systems and practical AI workflows. Brings 8+ years of hands-on Terraform experience, delivering production cloud infrastructure through infrastructure as code. Delivers Python, FastAPI, LangGraph, evaluation, validation, governance, durable processing, and observability to move AI-enabled services from prototype toward controlled production use. Brings hands-on platform depth across a 540+ account AWS environment, 140+ servers, and 250+ services.

Technical Skills

- **AI Engineering:** Python, FastAPI, LangGraph, agent orchestration, tool integration, AI-assisted diagnostics, and safe tool execution
- **Grounding & Governance:** Evidence grounding, source-bound context, evaluation, validation workflows, risk assessment, explicit approval gates, durable records, and human-in-the-loop review
- **Backend & Workflow Systems:** APIs, SQLite, SQL/NoSQL databases, durable queues, background workers, artifact manifests, transcript processing, and traceable batch automation
- **Quality & Reliability:** Unit, integration, end-to-end, regression, and fault-injection testing; monitoring, alerting, root-cause analysis, production support, and recoverability
- **Platform & Delivery:** AWS, Linux, Terraform, IAM, VPC, Git workflows, CI/CD, release automation, deployment validation, Vault, and secrets management

Professional Experience

Agent Foundations Engineering (Independent) | Remote | 2025 - Present

Platform Automation / AI Agent Systems Engineer

- Built Aegis, a risk-scaled AI SDLC with a nine-gate lifecycle, traceable work packages, spec-derived tests, and explicit pre-execution and deployment authorization gates.
- Use AI daily for coding; building skills, workflows, and applications; designing evaluations and research; red-teaming conflict de-escalation; and conducting code and security reviews.
- Built an AI-agent-ready transcription and batch-processing platform with Python, FastAPI, SQLite, LangGraph, durable queues, monitoring, artifact records, and approval workflows.
- Added per-item rate limits, health-based batch caps, and database-backed pending-job recovery; no further external-API lockouts were observed after the controls were introduced.
- Developed an AI-assisted Buildkite diagnostics prototype using webhook analysis, fault-injection testing, unit tests, and end-to-end validation to identify pipeline failures and recommend remediation.

Charter Communications LLC | Greenwood Village, CO | 2022 - 2025

Principal Engineer I

- Contributed software architecture, automation, and operational support for cloud engineering across a 540+ account AWS environment, emphasizing reliability, delivery governance, and platform health.
- Built a reusable GitLab deployment framework with staged validation, fail-fast quality gates, standardized workflow templates, and release automation across 140+ servers.
- Stabilized a degraded Vault platform supporting 250+ services by improving architecture, observability, documentation, and support patterns for reliable SRE ownership.

Charter Communications LLC | Greenwood Village, CO | 2019 - 2022

Systems Engineer IV

- Led CloudCage as technical product manager and team lead, turning fragmented AWS account metadata into a shared system of record required by 5+ external teams.
- Drove roughly \$5M in annual cloud savings by identifying orphaned, underutilized, and oversized resources, increasing owner accountability and remediation.

Charter Communications LLC / Bright House Networks | Greenwood Village, CO & Orlando, FL | 2009 - 2019

Systems Engineer III / Senior Web Developer II

- Established SDLC and quality-engineering standards for a 32-site production platform through testing practices, release checklists, rollout guardrails, and validation steps.
- Led Adobe Experience Manager implementation across a 12-server multiplexed cluster supporting regional sites from NY1 to Hawaii, and led a 15-person UI/UX team across an eight-site program.

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- Validated high-traffic news and sports readiness for 5M+ visitors per hour through Varnish caching, JMeter, and Siege load testing.

Selected Projects

- **Aegis — Risk-Scaled AI SDLC:** Built a risk-scaled, evidence-led workflow for scoping technical work, assessing risk, governing source evidence, validating results, and retaining consequential decisions behind explicit human approval gates.
- **Mind's Eye — Governed Context-Memory Research:** Designed a local, Markdown-first prototype for human-curated, source-linked project context; explicitly deferred automatic capture, retrieval, embeddings, APIs, and background agents.
- **Transcription & Batch-Processing Platform:** Built an AI-agent-ready platform with FastAPI, SQLite, LangGraph, durable queues, monitoring, artifact manifests, and approval workflows for safe, traceable processing.
- **Buildkite Diagnostics:** Developed webhook-driven analysis with fault injection, unit tests, and end-to-end validation to identify likely pipeline failure causes and recommend remediation.

Education & Certifications

Bachelor of Science (BS), Computer Science — Florida Southern College, Lakeland, FL

Diploma in Audio Production and Recording — Full Sail University, Orlando, FL

Professional Scrum Master I — Scrum.org (2022) | Red Hat Ansible Training — Red Hat (2021)