

Nathan Yearout

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Full-Stack Software Engineer (Fintech & Payments)

Backend-focused engineer with hands-on experience designing and scaling transaction-critical APIs, integrating acquired platforms, and supporting international expansion in regulated environments. Proven track record improving payment reliability, implementing observability and CI/CD pipelines, and delivering secure, maintainable backend systems using Python, Flask/FastAPI, and cloud infrastructure (AWS/GCP).

WORK EXPERIENCE

Payload.com August 2023 - Present
Full-Stack Software Engineer Cincinnati, OH

- Led the redesign and deployment of API v2.0, refactoring legacy endpoints (/accounts, /profiles, processing settings) into a modular architecture that reduced coupling, improved maintainability, and accelerated new feature development.
- Owned backend integration of the acquired platform PlacePay, migrating customer and payment data, implementing webhook ingestion, and extending SDK functionality to unify multiple payment flows under a single processing system.
- Built and enhanced core payment logic including card brand filtering, AVS validation, and custom card pricing, contributing to measurable improvements in transaction reliability and platform compliance.
- Implemented Datadog monitoring and alerting, improving system observability and reducing mean time to diagnose production issues; migrated CI/CD pipelines from Azure to AWS, resulting in faster, more reliable deployments.
- Enabled international expansion by integrating Twilio-based MFA and adding support for Canadian banking systems, unlocking new regional market support with enhanced security controls.
- Collaborated closely with product and senior engineering leadership to design scalable backend systems during a rapid growth phase, supporting the team's expansion from 3 → 8 engineers while maintaining system stability.

PROJECTS

Siphra - Double-Entry Bookkeeping SDK September 2023 - December 2023

<https://github.com/NathanYearout/siphra>

- Engineered a high-performance Python SDK for double-entry bookkeeping, leveraging Pydantic and Mypy to enforce strict data integrity and prevent unbalanced transactions at runtime.
- Architected a decoupled, asynchronous storage layer using the Repository Pattern, allowing seamless transitions between PostgreSQL, SQLite, and Redis while maintaining 100% interface consistency.
- Developed a multi-currency ledger system capable of handling fiat and crypto (BTC, ETH) with arbitrary-precision decimals (up to 18 places), eliminating rounding errors in complex financial calculations.
- Designed an immutable audit trail via a robust Transaction State Machine, ensuring regulatory compliance by enforcing append-only logic and cryptographic-like traceability.
- Built an async-first REST API optimized for high-concurrency workloads, achieving 100% test coverage via Pytest and implementing idempotency keys to prevent duplicate financial operations.

SKILLS

Languages & Frameworks: FastAPI, Flask, Python, REST APIs, SQL

Cloud & DevOps: AWS (Lambda, CI/CD, Datadog, Docker, EC2, GCP, GitHub Actions, S3)

Databases: MySQL, PostgreSQL, Redis, SQLAlchemy ORM

Tools & Integrations: Postman, Pytest, SDK Development, Twilio, Webhooks

Domain Expertise: API Architecture, Data Migration, Fintech Systems, Payment Processing, System Integration