

DAVID MANUFOR

Software Engineer · TypeScript · Go · Python · GCP

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SUMMARY

Software engineer with four years of production experience across fintech, e-commerce, and healthtech, delivered through an independent consultancy alongside a full-time Computer Science degree. Builds full-stack systems in TypeScript, Go, and Python, including a cross-border wallet engine settling three fiat currencies against an on-chain token and a multi-tenant, event-driven platform that tracks clause-level changes across contracts and privacy policies. Seeking a software engineering role on a team building reliable systems at scale.

TECHNICAL SKILLS

Languages: TypeScript, Go, Python, JavaScript (ES6+), Kotlin, SQL

Backend: Node.js, Express, FastAPI, Prisma, REST APIs, event-driven services, Pub/Sub workers, WebSockets

Frontend: React, Next.js, Vite, Tailwind CSS, TanStack Query, component libraries, accessible UI (semantic HTML, ARIA)

Cloud & Infrastructure: GCP, AWS, Docker, Terraform, GitActions, CI/CD

Data & AI: PostgreSQL, MongoDB, Redis, retrieval-augmented generation, LLM integration (Gemini, Claude, OpenAI, Deepgram)

Testing & Practices: Playwright, Vitest, Pytest, monorepo tooling (Turborepo), code review, technical documentation

PROFESSIONAL EXPERIENCE

Astra Development Studio — Founder & Software Engineer

Remote | 2022 – Present

Registered consultancy delivering contract engineering to startups in fintech, e-commerce, and healthtech. 20+ engagements delivered alongside full-time studies.

- Built end-to-end checkout and payments for a UK e-commerce client, integrating Stripe and PayPal with idempotency keys, automatic retries, and webhook reconciliation to prevent duplicate charges and lost orders on dropped connections or repeated provider callbacks.
- Designed the payment backend and frontend interfaces for a startup fintech, covering mobile-money and card flows across third-party providers.
- Built a booking and scheduling platform for a Kenyan therapy provider with an accessibility-focused frontend, coordinating delivery across a 10-practitioner remote team.
- Shipped multiple custom e-commerce platforms against headless CMS backends, owning architecture, implementation, and deployment.

SmartPay — Software Engineering Intern

Remote | Feb 2024 – Sep 2024

Fintech startup building a hybrid fiat-cryptocurrency wallet for cross-border payments; 13-person engineering organisation.

- Co-built the cross-border payment engine in Go and Express, implementing multi-currency ledgers across three fiat currencies and the platform's on-chain token to settle fiat-to-crypto transfers.
- Established Next.js architectures and reusable component library adopted by the three-person frontend squad as the wallet's design-system foundation.
- Co-authored design documents covering ledger structure, settlement paths, and failure handling ahead of implementation.
- Reviewed code across backend services and frontend features as part of the team's review rotation.

SELECTED PROJECTS

ClauSync AI — Multi-tenant contract and policy change monitoring

TypeScript · Python · GCP

github.com/dave-manufor/clausync-ai | clausync.davman.dev

- Architected a 12-service Turborepo monorepo, with REST API, web application, marketing site, and nine independently deployed Pub/Sub workers, moving a nine-minute scrape, diff, and clause-analysis pipeline off the public request path so a single failing stage cannot halt processing and each stage scales independently.
- Enforced tenant isolation in PostgreSQL through row-level security and a Prisma \$allModels extension that applies the tenant predicate automatically, eliminating cross-tenant exposure from omitted WHERE clauses.
- Built the retrieval-augmented generation pipeline on pgvector and Vertex AI embeddings, grounding clause extraction in each tenant's own policy baseline, with confidence scoring and fallbacks for malformed model output.
- Provisioned 55 GCP resources as modular Terraform and moved schema migrations out of container startup into a Terraform-managed Cloud Run Job, eliminating cold-start races on deploy.

- Maintained 134 automated tests across TypeScript and Python services, alongside a product requirements document, architecture design document, and API specification.

BlackBridge — Zero-knowledge encrypted file transfer

TypeScript · AWS · WebRTC

github.com/dave-manufor/blackbridge-app | blackbridge.davman.dev | ~500 users

- Implemented client-side OpenPGP encryption across a Web Worker pool sized to available CPU cores, streaming ciphertext in 64 KB chunks to support files up to 10 GB without blocking the main thread or exhausting browser memory.
- Implemented Secure Remote Password authentication so the server receives only a cryptographic proof of the password rather than the password or a hash of it, and added PGP public-key sharing so file keys never reach the server.
- Implemented encrypted peer-to-peer transfers using WebRTC and a custom signaling server.
- Built a 101-endpoint Express and Prisma API across 14 data models, hardened with Redis-backed rate limiting that holds across instances and short-lived signed CloudFront URLs for download authorisation.
- Provisioned 41 AWS resources as Terraform and validated authentication and transfer flows with Playwright end-to-end tests in CI.

ViralCue — Real-time AI co-pilot for live streamers

TypeScript · Python · GCP · AWS

github.com/dave-manufor/viralcue

- Built a five-service microservices system with an Express and TypeScript API gateway (REST and WebSocket) fronting Python services for audio ingestion, AI analysis, and video processing.
- Connected services asynchronously over Pub/Sub and Kinesis, running the stream monitor on GKE and clip and transcode jobs on Cloud Run.
- Integrated Twitch, Deepgram, TikTok, and X APIs, and authored the deployment runbook, API documentation, and GCP IAM setup guide.

prompt-template-manager — Python library for versioned prompt templates

Python · PyPI

pypi.org/project/prompt-template-manager

- Published and maintain an MIT-licensed library for composing and versioning reusable prompt templates, through four releases under semantic versioning with 85% test coverage and support for Python 3.9+.

EDUCATION

Strathmore University — BSc. Informatics and Computer Science

Nairobi, Kenya | August 2026

Coursework: Distributed Systems, Operating Systems, Compilers, Data Structures & Algorithms, Database Systems, Computer Networks, Artificial Intelligence & Machine Learning, Information Systems Security Design.