

# Kavish Singh

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## SUMMARY

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Software engineer who builds, ships and supports production systems with AI coding agents (Claude Code, Codex), and knows each stack shipped well enough to specify, review, deploy, debug and operate it: full-stack web applications, Rust/Tauri desktop software, Linux service daemons, and the Docker, VPS and CI infrastructure under them. Four years of delivery against a small business's deadlines and federal compliance rules, not a self-set roadmap. Seeking a full-time engineering role on a product team, because the systems worth building next are larger than one operator can carry. Most recent deliveries: a retail kiosk replacement in Flask and Rust/Tauri, live on the store floor with usage billing and signed auto-updates, and Sayso, a push-to-talk dictation app rewritten in Rust and installed in October 2026.

## TECHNICAL SKILLS

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**Builds with:** Python (Flask), Rust (Tauri v2, axum, tokio), TypeScript (React 19, Vite), SQLite, xterm.js, Square and AWS SES APIs

**Deploys and operates:** Docker, Nginx Proxy Manager, Cloudflare, Linux, Proxmox, Tailscale, GitHub Actions CI with code-signed releases, cgroup v2, Windows ConPTY and boot tasks, pytest, cargo test, vitest

**Works with AI agents:** Claude Code and Codex CLIs as daily build tooling, MCP servers, hook-enforced model routing, multi-agent research pipelines

**Compliance work:** AML/KYC, Bank Secrecy Act record retention, DOJ Live Scan

## RELEVANT EXPERIENCE

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**Founder, Nexus Vantage Group** | Sacramento, CA | September 2025 to Present

*One-person software studio, sole engineer and operator, building production web, desktop and AI-agent systems for small businesses and for its own products.*

- Built and operates lofa4507.com, the production website for The UPS Store #4507, in Python/Flask, SQLite, AWS SES and Docker: a customer file-upload portal plus a staff dashboard with two-factor login and passkeys, payroll, Live Scan workflow and a daily log, shipped across 415 commits behind 795 tests and used by store staff daily; four security-audit batches shipped in September 2026.
- Replaced the store's self-service kiosk with a Flask service and a Rust/Tauri v2 desktop shell, now live on the store floor: Square payments, a code-signed auto-updater behind a token-gated private release proxy, pre-logon updates from a SYSTEM boot task, usage billing and walk-away sessions that bill only to the last input; 848 commits, 703 pytest and 118 cargo tests, cut over after a leg-by-leg Windows VM rehearsal.
- Retired the website's Western Union compliance module on the store's schedule in August 2026, replacing it with a read-only archive that keeps every transaction record available for the five-year Bank Secrecy Act retention rule.
- Runs the hosting: one VPS fronting five sites on Docker behind Nginx Proxy Manager and Cloudflare, with git-push auto-deploy, UFW port hardening and GitHub Actions code-signed builds; a second client site, Bandola Brews, has run there since July 2026.
- Designs and runs multi-agent research pipelines: 15 to 20 parallel LLM agents with schema-constrained outputs, source-tier rules and prompt-injection screening, for market and technical due diligence.

**Sales Associate, promoted to Assistant General Manager and designer** | The UPS Store #4507, Sacramento, CA | October 2022 to Present

- Joined at the counter, identified recurring procedure failures and built the fixes that became the store's production software: lofa4507.com, the secure document upload portal and staff dashboard he operates, and the phone routing now in daily use; also handles the store's print and design work.
- Served as the store's designated Western Union compliance officer until the service was retired in August 2026: customer due diligence, transaction audits and risk assessments under federal AML and KYC rules.
- Submits applicant fingerprints and criminal-history documents to the California Department of Justice daily as a certified Live Scan rolling operator; under strict DOJ codes and confidentiality rules.
- Handles shipping, printing, packaging and payment transactions in a store running 150 to 200 transactions per day, and contributed to the store's rating rising from Bronze to Silver.

**Sales Manager (part-time), AutoZone** | Sacramento, CA | June 2021 to February 2022

Reconciled cash drawers with 100 percent accuracy, maintained inventory counts and database records, and led store closing.

## SELECTED ENGINEERING PROJECTS

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**Cokpit, agentic development environment and its session hub** | Tauri (Rust), React 19, TypeScript, axum, xterm.js | June 2026 to Present

*The environment his agent sessions run in, plus a daemon on a home Proxmox VM that owns every session so work survives a disconnect.*

- Runs the claude and codex CLIs as Windows ConPTY sidecars beside a file explorer, Monaco editor and live diff, with an infinite pan-and-zoom canvas of live terminals and an internal MCP control plane for programmatic pane control; version 0.0.38 installed October 2026, public site at cokpit.dev.
- Built the hub daemon in Rust with AI coding agents (axum, rusqlite, pty-process, a vendored terminal emulator): per-session cgroup v2 isolation, garble-free reattach rebuilt from headless emulator state, multi-client fan-out, single-writer SQLite persistence, auto-resume across restarts, and a WebSocket and REST API on loopback behind constant-time bearer auth over a Tailscale tailnet; 197 daemon and 318 client tests in one week.

**Sayso, push-to-talk dictation for Windows** | Rust, Tauri v2, React 19 | June to October 2026

- Rewrote the Python original in Rust and installed it in October 2026: cloud speech-to-text, text typed one character per input call because batching corrupted it, about 4 MB and 0% CPU at idle, a per-user installer tested on a clean VM, and a context engine that learns vocabulary from kept dictations without ever auto-replacing a real word; 132 Rust tests, a 28-fix independent review batch merged before install.

**Routr, model routing and enforcement for agent work** | Python 3.13, Claude Code hooks, OpenRouter | September 2026 to Present

- A dispatcher picks the provider and model for each task family and difficulty tier and records every launch; coding-agent hooks deny any delegation, write or shell call that did not go through it; wallet readings keep two subscriptions inside a weekly reserve. September 2026 audit: 765 launches, every one on the correct seat; 923 tests.

## EDUCATION AND CERTIFICATIONS

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Attended **California State University, Sacramento**, 2020 to 2023, coursework in Business Finance and Computer Science.

**Certifications:** California Notary Public, commissioned 2023, expires August 2027 | California DOJ Certified Live Scan Fingerprint Rolling Operator, no expiration

**Languages:** English (native); Hindi (native)