

Santhosh V

FULL-STACK SOFTWARE ENGINEER · FINTECH & PAYMENTS

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Full-stack engineer building payments and acquiring infrastructure — **1,150+ commits across ~30 NestJS/TypeScript microservices and the Angular operations console** of a Swedish payments platform. Built an event-driven settlement engine and an AML transaction-monitoring rule engine, authored a **from-scratch typed Creditsafe credit-data SDK**, and owned the platform's global search service. Shipped two production AI features and rebuilt the ops console's **list, ticketing and alert-review** experiences in Angular (Signals).

Work Experience

Surfboard · Chennai, India

Feb 2024 – Present · 2 yrs 5 mos

Software Engineer

Jun 2024 – Present

Software Engineer Intern

Feb 2024 – May 2024

Payments & acquiring platform · Nx monorepo of NestJS/TypeScript microservices + the Angular operations console.

◆ PAYMENTS, SETTLEMENTS & BILLING

- Built an **event-driven settlement engine** computing merchant payouts from acquirer files — fees, commissions, VAT, adjustments and chargebacks — across four run cadences from daily to partner-level.
- Generated **bank payout files**, including a DNB (NOK) ISO-20022-style XML with KID/OCR creditor references and BBAN transfers, plus PDF/CSV settlement reports.
- Designed **partner/merchant billing-plan management** with currency-specific, per-payment-method fees, wiring fee calculation into the payment-completion path.
- Improved a Bun/Elysia **payment-isolation service** — moved the Epassi integration to secure **per-merchant credentials** and fixed a payment-method caching bug.

◆ KYC, CREDIT DATA & AML

- Designed and built a **from-scratch, typed Creditsafe credit-data SDK** — a fluent client + facade over three transports (Connect REST/JWT, getData OAuth2, SOAP webservices) with per-transport auth, a memory/Redis token store, XML→JSON parsing, a typed error catalog, request-scoped logging with secret redaction, and raw-response persistence to a unified table — then migrated every legacy consumer and stored response onto it.
- Implemented the **AML transaction-monitoring rule engine** — MCC/merchant-level overrides, currency-specific config, and timezone-aware 1-min/10-min/daily evaluation cadences — with bulk alert management and audit log.
- Extended **KYC/KYB onboarding across Swedish and Finnish markets** — credit-info fields, a corporate-id migration and admin bank-detail flows.
- Shipped an **AI-assisted AML alert-triage assistant** (Google Gemini, structured JSON) classifying alerts into three review categories with confidence and reasoning, extended with a googleSearch-grounded store-research pipeline — kept strictly human-in-the-loop with a full audit trail.

◆ SEARCH, DATA & INTEGRATIONS

- Sole builder and owner of the platform's **Typesense-backed global search service** (built during my internship) — faceted, partner-scoped search APIs, event-driven document sync, index migrations and Slack-alerted maintenance crons.
- Built **merchant/partner analytics over ClickHouse** — a top-merchants-by-currency API with two-level pagination — plus a transactions → analytics migration pipeline feeding the reporting layer.
- Delivered integrations spanning **six payment providers** — two-phase Fiserv onboarding (polling cron, GCS transfer), BankAxept and AMEX enablement, Klarna/Fiserv SFTP settlement-file ingestion, and Worldline/Northmill reconciliation.
- Built an **autonomous merchant-onboarding browser agent** (Claude Sonnet + Browserbase Stagehand) that creates sites and configures activities when a partner form flow breaks, and integrated nShift returns shipping behind a provider factory with fallback and RFC-7231-aware retry.

◆ FRONTEND — OPERATIONS CONSOLE (ANGULAR, SIGNALS)

- Built a **support ticketing system** — a shared inbox with assignee filters and unassigned counts, group-by partner/merchant, an @-mention picker, and ticket tabs embedded on merchant and partner detail views.
- **Rebuilt the console's list pages with a new UI** — filter panels, multi-sort and status cards across merchant, partner, KYC and onboarding lists, unified on a reusable list-shell and a shared date-range filter adopted across **15 pages**.
- Built the **transaction-monitoring AI alert-review UI** — confidence-scored dispositions with role-gated apply and hover previews — plus a human-readable rule-threshold editor with live rule-name templating.
- Built the **activity feed** and improved the console's stability — fixing memory leaks, timer cleanup and offline data-sync reliability.

Education

Master of Computer Applications (MCA) 2022 — 2024 · CGPA 8.98
Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya, Kanchipuram, India

B.Sc. Mathematics 2019 — 2022 · CGPA 8.03
Agurchand Manmull Jain College, Meenambakkam, Chennai, India

Skills

LANGUAGES	TypeScript	JavaScript	SQL						
BACKEND & RUNTIME	Node.js	Bun	NestJS	Fastify	Elysia	Nx monorepo			
FRONTEND	Angular (Signals)	RxJS	Dexie / IndexedDB	Tailwind	SCSS				
DATABASES & SEARCH	PostgreSQL	TypeORM	Prisma / Drizzle	Typesense	ClickHouse / QuestDB				
MESSAGING & CACHE	RabbitMQ	Redis	Event-driven / pub-sub						
AI	Google Gemini	Claude (Sonnet)	Structured output	Search grounding	Stagehand agent				
INTEGRATIONS	REST · SOAP/XML	OAuth2 / JWT	ISO-20022	SFTP / FTP	GCS · KMS	Fiserv	Worldline	Klarna	Creditsafe
PRACTICES	SDK / client design	Jest / Supertest	Cypress	Schema validation (TypeBox/Zod)	Retry & backoff	Observability			