

Varun Singh

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EDUCATION

B.Tech, Computer Science and Engineering

SRM Institute of Science and Technology

Sept 2022 - May 2026

Chennai, India

SKILLS

Languages	TypeScript, JavaScript, HTML, CSS, Python, SQL
Frontend	React, Next.js (App Router), React Native (Expo), Tailwind CSS, Zustand, responsive design
Web Platform	WebSockets, PWAs & service workers, Trusted Web Activity, MediaDevices & ResizeObserver APIs
UI Libraries	lightweight-charts, Recharts, Chart.js, React Flow, shadcn/ui, Radix UI
Testing & Tooling	Vitest, Git, GitHub Actions, CI/CD, Vercel, Docker, Firebase, GCP
Backend & AI	Node.js, Express, FastAPI, PostgreSQL, Redis, Anthropic API, MCP servers, LLM agents

EXPERIENCE

Founding Engineer

Rootpay Technology, Inc.

Jan 2026 - Aug 2026

Delaware, USA (Remote)

- Built the React Native (Expo) app & Next.js website solo: phone-OTP & OAuth sign-in, multi-step KYC & residency onboarding, and the USD to INR send-money flow, with user & transaction state held in Zustand stores.
- Also owned the Node backend & GCP infra: 100+ PRs merged, 100+ transacting users, \$2K to \$4K daily volume.
- Event-driven settlement: the API acknowledges instantly while a worker confirms against partner ledgers, holding settlement at 2 to 3s vs multi-day SWIFT rails; idempotency keys & a 30s reconciliation job make retries safe.

SDE Intern, AI Systems

HyperVerge

Sep 2025 - June 2026

Bengaluru, India (Onsite)

- Built an agentic FastAPI pipeline turning Notion & Google Docs PRDs into GitLab MRs in 45 to 90s: Anthropic API & MCP planning, Slack approval, and a PostgreSQL state machine with idempotency keys. 17 PRDs closed; adopted by 3 teams.
- Added PII redaction to production KYC APIs at 15 to 30 req/s, running OCR coordinate math on downscaled bitmaps before the blur render to hold added cost at 15 to 35 ms/doc across 1.5M+ verifications for 15+ enterprise clients.

Data Engineering Intern

SRM Technologies

June 2025 - Sept 2025

Remote

- Built a dual-storage ETL pipeline moving 4 to 6 GB daily, tokenizing 5+ PII categories across Firebase & IPFS.

Fullstack Intern

Biconomy

Apr 2024 - Dec 2024

Dubai, UAE (Remote)

- Integrated the Smart Account V2 SDK (session keys, permissions) into an existing product as a native-feeling feature.
- Built a cross-chain Bitcoin Grants donation flow with ERC-4337 account abstraction & bundling: \$4K+ from 100+ users.

PROJECTS

VibeTrading Club | vibetrading.club | Next.js 15, React 19, TypeScript, Tailwind, lightweight-charts, Vitest | Live, public beta

- Built a crypto chart analysis app streaming live data for 9 Binance pairs, drawing support & resistance levels & W/M patterns as chart overlays, with a chat assistant whose suggested levels land on the chart in one click.
- Designed desktop & phone layouts from one codebase: on phone the chart fills the screen with a bottom bar switching between chart, analysis & assistant; shipped as an installable PWA & an Android app now in closed testing.
- Wrote a reconnecting WebSocket hook for real-time alerts: exponential backoff capped at 30s, heartbeat pings, auth in the first frame instead of the URL, and callbacks in refs so re-renders never drop the socket; 40+ Vitest tests.

Kōan | unite-defi.vercel.app | React Flow, Next.js, TypeScript, Tailwind, Firebase, IPFS | Live

- No-code DeFi builder (team of 3; built 90%+ of the frontend): users compose apps on a drag-and-drop React Flow canvas from 22 plugin nodes (wallet, 1inch swaps, Fusion+, limit orders) & export a generated Next.js & Express app.
- Designed a TypeScript execution engine that runs each workflow end to end, step by step or in batch, for component-level testing before code generation; added live preview, one-click GitHub publish & starter templates.

RemitIndex | remitindex.com | Next.js, React, Gemini Flash | Live

- Built a comparison platform for NRIs & expats covering remittance, forex cards, credit cards & eSIMs across 30+ providers & 40+ currencies, with a live send-money rate calculator & daily rate updates.
- Built a programmatic SEO pipeline generating pages across 101 niches & 4 page types from Gemini Flash structured output.

SensAI Integrity Suite | Next.js 15, React 19, TypeScript, MediaPipe

- Built the proctored-assessment layer on HyperVerge's open-source SensAI LMS (team of 2): camera live preview with in-browser face detection, an admin dashboard & sortable timeline of flagged events, and debounced quiz autosave.

ReportEase | React, Chart.js, Flask, Mistral 7B, Tesseract OCR | In use by Rajasthan Police

- Built a React & Chart.js crime analytics dashboard (CCTNS) on top of an FIR analysis tool that parses reports via OCR & suggests IPC & CrPC sections through a fine-tuned Mistral 7B at 96% accuracy.

LEADERSHIP AND ACHIEVEMENTS

- 1st place, Rajasthan Police Hackathon 1.0 among 1,665 teams | 1st place, Barclays Project Expo among 400 teams | Okto Track winner, ETH India 2024 | Shardeum Track winner, Layer 2.0.
- Crypto Domain Lead, SRM Blockchain Club (Oct 2022 - Dec 2025): ran Dune Analytics research on token flow patterns.