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Jalgaon, India

WORK EXPERIENCES

Product Engineer | Contract — May 2026 - Present

Noketa — *Remote • Czech, Prague*

- **Re-architected a monolith into independently microservices** Public API, Control Plane, Inbound Lambda, and SMTP/IMAP mail server within a Bun/Turborepo monorepo, enabling parallel development and faster channel delivery.
- **Built a unified omnichannel messaging platform across 5 channels** - Email, SMS, WhatsApp, Push, and Instagram using a common channel abstraction that enables new integrations through adapters rather than platform rewrites.
- **Integrated AWS End User Messaging, SES/SNS, and Meta Graph APIs** for outbound delivery, webhook-driven bounce/complaint processing, and automated STOP/HELP handling with consent and suppression enforcement.
- **Designed a multi-agent GTM automation system** for sales outreach, campaigns, and workflows using supervisor-worker orchestration and human-in-the-loop approval gates, reducing LLM token costs by **15%**.
- **Automated production provisioning and cutover** by integrating Terraform, Infisical, and Neon database branching into a single-command workflow, with mock-mode testing across all 5 channels.
- **Built compliance-focused SMS capabilities** including MMS/RCS, quiet hours, consent management, and keyword-based preferences, enabling the internal marketing team to run live campaigns.
- **Designed reusable channel configuration UX** for connection flows, business profiles, and deliverability controls across broadcasts, automations, and templates, reducing misconfiguration-related support overhead.

Impact: Scaled Noketa from MVP to production-ready infrastructure, onboarding 7 SaaS founders onto the platform.

Technologies / Skills Used : *nextjs, terraform, neondb, Node.js, Tailwind CSS, hono, Drizzle ORM, Better Auth, Redis, Stripe, AWS, Meta*

Founding Engineer | Full-time — Oct 2024 - Jun 2026

PayZoll (Previously PayNova) — *On-site • India*

- **Built a multi-tenant Stellar Disbursement Platform (SDP)** for PayZoll, provisioning isolated organizational tenants with dedicated hot wallets, assets, payroll records, and API rate limits.
- **Engineered a Node.js/Express orchestration layer** with tenant-level login and MFA, Redis-cached SDP JWTs (15-minute TTL), and encrypted in-memory credential caching for seamless re-authentication.
- **Implemented just-in-time payroll conversion** from USD salaries to USDC, EUR, and XLM using CoinGecko and Redis, enabling rapid on-chain disbursements.
- **Scaled payroll throughput ~100×, from ~2 to ~200 transactions/sec**, overcoming SDP's 8-channel-account limit by leveraging Soroban's **authorization-tree** model for parallel contract calls.
- **Automated bulk payroll processing** through recipient CSV uploads and background workers, with disbursement-status polling and organization-scoped SSE updates from PostgreSQL to power real-time admin dashboards.
- **Enabled cross-border USDC-to-INR payments** by integrating **Xflow's** APIs/SDK and virtual accounts with Stellar, supporting near-instant on-chain settlement and reducing reliance on traditional banking rails.

Impact :- Deployed on Stellar Soroban mainnet; processed up to **$11K/month** at peak; onboarded HackQuest as a paying enterprise client; secured a **$100K Stellar Community Fund grant.**

Technologies / Skills Used : *Posthog, Sentry, Node.js, Express, React, PostgreSQL, Redis, JWT, Stellar SDK, SDP, AWS SES, Twilio, GCP (GCE / Cloud Build), Cloudflare Tunnel, OpenTelemetry, PM2, Docker, soroban, solidity*

PROJECTS

AgentOps - Agentic Payment Governance Platform | Github Website X Demo — May - Present

Finalist @ CasperHacks · Selected for accelerator review from 500 arc projects

- Architected a pre-execution financial control plane for autonomous AI agents, enforcing **per-agent wallets, organization budgets, spend caps, and human approvals** across external x402 payments and intra-fleet transfers, with hash-chained audit logs and isolated settlement credentials.
- Proved spend-limit enforcement on live Arc testnet: rejected **100%** of **$25** payment attempts against a **$20 USDC wallet** while successfully settling valid **$5 payments**, enforcing budget limits against funded balances and organizational policies.
- Built and tested a hierarchical **5-agent fleet** (Orchestrator → DataFetcher → Analyst → Writer → SeniorReviewer) under a shared organizational budget, enabling Permit2-signed intra-fleet transfers, cross-chain settlement to Base, and runtime overspend prevention.
- Designed a multi-rail payment abstraction supporting x402 for external payments and Permit2 for intra-fleet transfers, exposed through a hosted MCP server and SDK for unified agent-driven payment execution.
- Hardened live-chain payment execution, stabilizing flaky Arc RPC balance reads with bounded retries (**6 attempts, 400 ms backoff**), fixing **Permit2 nonce-reuse** and settlement bugs, and ensuring failed balance reads never trigger unsafe spend decisions.
- Found and reported a Circle Developer-Controlled Wallets bug (public write-up) where externally funded Base Sepolia wallets were incorrectly rejected for insufficient ETH balance, blocking transactions despite sufficient on-chain funds.
- Designed agent orchestration evaluation workflows with replayable execution traces and scenarios covering adversarial overspending, prompt-injected payment requests, retry storms, and cross-agent budget contention.
- Deployed a vendored **ERC-8183 reference escrow** on Arc and Base Sepolia, identifying a budget-mismatch path in a stale contract build and hardening the deployment process by pinning verified contract builds.
  Impact: Demonstrated policy-enforced autonomous payments across two chains, validated bounded spending under adversarial conditions, and uncovered a reproducible wallet-indexing defect in Circle's integration.

Technologies / Tools Used : *MCP · Agent runtime credentials · Tool contracts · Policy engine · HITL approvals · Multi-agent fleet ops · Agent onboarding (/llms.txt) · Runtime SDK · Audit / evidence · Claude/Cursor agent integration*

Zera – AI-Native Contract Lifecycle Agent | Website — Apr 2025 - May 2025

Winner @ EduChain (Won $3000 - Got Opencampus incubation in semester 3)

- Built an **LLM-powered Node.js** agentic platform that converted natural-language specs into production-ready Solidity, automated tests, and docs.
- Designed **multi-step agent pipelines** coordinating analysis, Solidity synthesis, testing, and artifacts, cutting manual development effort by **~40%**.
- Integrated **Civic Auth** Web3 as decentralized identity: social login provisions keyless embedded wallets so users sign txs without managing keys.
- Wired Civic embedded wallets into wagmi/viem across EVM networks, enabling **passwordless** auth, auto-connect, and in-product transaction signing.
- Built an on-chain audit trail: keccak256-hashed contract source, ratings, and summaries registered via Civic-signed transactions on Sepolia.
- Shipped AI-driven security audits with severity scoring and Hardhat/Foundry/Truffle generation, producing 100+ tests per ERC-20 and NFT contract..

Technologies / Tools Used : *Nextjs, Supabase, Redux toolkit, Axios, TanStack React Query, Tailwind CSS, TypeScript, Radix UI, Civic Auth, solidity*

PROJECTS

SlashMarket – Multi-Agent Yield Optimization Protocol | Website Github Apr 2026 - May 2026

Design Write-up (https://x.com/Kaushaly4s5s7/status/2045463161403330690)

- **Built a non-custodial XTZ vault** on **Etherlink**, minting **ERC-20 shares 1:1** against native XTZ deposits, with pro-rata redemption and replay-protected yield distribution using unique event IDs.
- **Designed principal/yield tokenization** by splitting vault shares into **Principal Tokens (PT) and Yield Tokens (YT)** at a 1:1 ratio, implementing maturity-based loss absorption where yield absorbs staking losses before principal.
- **Engineered isolated risk pools** with separate vault, oracle, competition, and AMM deployments for **6% delegation yield** and **18% slashing-exposed staking yield**, preventing losses in one pool from affecting the other's reserves.
- **Developed an on-chain forecasting competition** where bonded agents predict baker performance and yield, with settlement based on forecast accuracy and **5% bond slashing** for losing agents. Stored **keccak256 hashes** of off-chain reasoning on-chain while keeping agent bonds separate from vault TVL.
- **Optimized yield accounting and trading** using a monotonic **1e18-scaled oracle index**, capped 5% updates, lazy per-holder accrual, and a **time-decay AMM** whose implied rate converges toward face value at maturity.

Impact : Designed and shipped the protocol in **48 hours**, earning **3rd place at the Tezos × Etherlink AI Hackathon**.*(Won $1000)*

Technologies / Tools Used : *Node.js, Docker, Tailwind CSS, solidity, etherlink, wagmi, OpenZeppelin*

TheOpenAssets - RWA Protocol | Github Website X Jul 2025 - Mar 2026

Winner (Onechain($3000)< U2U ($4000)< Mantle($2000))

- **Architected a modular backend for multi-chain RWA tokenization**, organizing ~20 domain modules into a single deployable system to simplify operations while keeping issuance, compliance, markets, yield, leverage, and solvency independently maintainable.
- **Engineered end-to-end ERC-3643 token issuance** across 17 Solidity contracts, integrating identity verification, compliance enforcement, primary issuance, and secondary-market settlement.
- **Designed a unified multi-chain architecture across 6 networks**—Mantle, HashKey, Creditcoin, BNB Chain, Arbitrum, and Stellar/Soroban—using a shared integration layer to support chain-specific transactions, wallets, events, payments, and signature verification without duplicating business logic.
- **Built an on-chain event indexing pipeline** across 9 contracts, processing blockchain events through background workers and idempotent handlers to maintain approximately **8-second data freshness**, with rate-limit-aware polling and recovery mechanisms for missed events.
- **Implemented automated liquidation monitoring** for leveraged positions, checking on-chain health factors every 60 seconds and triggering liquidation below **115%**, with tiered alerts and isolated error handling.
- **Developed cross-chain credit scoring for collateralized borrowing**, combining platform history (60%) with Creditcoin transaction history (40%), with fallback scoring for missing data or network failures and risk-based borrowing limits of **55–75% LTV**.
- **Established engineering standards** through shared type definitions, module-level architecture documentation, and end-to-end testing of critical financial workflows, including deposit-to-borrow.

Impact: Secured an **LOI** from **Triambi Solar** to explore tokenization of solar project assets and revenue streams through our RWA infrastructure.

Technologies / Tools Used : *Nestjs, Typescript, MongoDB, Redis, BullMQ, REST, SSE, React, Zustand, solidity, rust, rainbowkit*

SKILLS

Databases :	MySQL, MongoDB Atlas, Prisma ORM
Frameworks & Libraries :	Node.js, NestJS, Express.js, React, Next.js, Tailwind CSS, Bootstrap
Backend & Infra :	FastAPI, Node.js, NestJS, Next.js, Fastify, PostgreSQL, Redis, distributed queues and workers, database migrations, Docker, Kubernetes, AWS (EKS, S3, Lambda, KMS), GCP (GKE), GitHub Actions, Prometheus, Grafana
Programming Languages :	Rust, TypeScript, JavaScript, Solidity, C, C++, SQL, Python
Security :	AWS KMS key management, non-custodial account architecture, pgcrypto encrypted records, isolated per-tenant credentials, Slither and Mythril static analysis for smart contract audits
Agent Tools & Cloud Platforms :	AWS, Docker, IPFS, Filecoin, Pinata, Git, GitHub, VS Code, Postman, Chrome DevTools, Firebase, Supabase, npm, rubric design, AI agent orchestration, multi-model pipeline architecture, multi-agent coordination (Claude Code), RAG pipeline design, GCP

EDUCATIONS

Indian Institute of Information Technology, Guwahati Sep 2022 - Jun 2026

B.Tech in Computer Science and Engineering,

AWARDS & ACHIEVEMENTS

- **7× Hackathon Winner** across multiple technical competitions.
- Got Featured on Onechain Winners page
- Selected as BNB Chain Martian (As a Dev), August 2025