

Abhinav Pangaria

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SUMMARY

Full-stack software engineer with production experience across distributed backend systems, backend security, and blockchain infrastructure. At PayZoll, redesigned Stellar's Disbursement Platform end to end: multi-tenant architecture, non-custodial key management via AWS KMS, encrypted data at rest, and a distributed transaction queue with real-time state tracking, taking throughput from roughly 2 to roughly 200 transactions per second across infrastructure spanning AWS and GCP. Comfortable across the stack, from Rust and Go services to Python and FastAPI backends to TypeScript and Next.js applications, and has shipped production systems including an AI agent control plane built on MCP (Model Context Protocol). Also works as an independent contractor via Parsewave, designing evaluation and training pipelines for frontier AI models. B.Tech Computer Science graduate of IIIT Guwahati, CGPA 9.1/10.

SKILLS

Languages: TypeScript, Rust, Python, Go, JavaScript, Solidity, SQL, Bash

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

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

Distributed Systems & Blockchain: Solidity, EVM, Stellar Soroban, Polkadot XCM, ERC-3643 (RWA compliance), Zero-Knowledge proofs (Noir)

AI & Agent Tooling: AI agent orchestration, MCP (Model Context Protocol), rubric design, multi-model pipeline architecture, multi-agent coordination (Claude Code, Codex), agent policy and governance systems, RAG pipeline design

EXPERIENCE

Co-founder & Lead Architect/Engineer, PayZoll

Jan 2025 - Jun 2026

payzoll.in, Web3-native cross-border payroll and treasury platform

Sole technical owner on a two-person founding team; owned all architecture and code for the payment infrastructure below.

- Redesigned the Stellar Disbursement Platform (SDP) from a single-tenant tool into a multi-tenant distributed system supporting batch payroll across many organizations at once, building the Go-to-Rust/Soroban adapter layer myself after learning Go from scratch for the integration.
- Designed the transaction security cycle end to end: each organization gets an isolated, non-custodial account with signing keys hardware-derived via AWS KMS instead of raw tokens, and payroll records are encrypted at rest with PostgreSQL pgcrypto, so no organization's funds or data are ever exposed to another tenant.
- Solved a hard throughput ceiling: SDP was capped at 8 channel accounts (~2 tx/sec). Used Soroban's authorization-tree model to fan one channel account into many parallel contract calls, taking throughput to roughly 200 tx/sec (~100x).
- Rebuilt the transaction queue and event layer with distributed workers so batch payments carry real per-transaction state over SSE, replacing an "optimistic done" status that marked payments successful before on-chain confirmation, and added a fund-recovery service to unwind partial failures without losing funds.
- Ran production infrastructure across AWS (EKS) and GCP (GKE) with Kubernetes orchestration, Prometheus/Grafana monitoring, and GitHub Actions CI/CD.
- Result: live on Stellar Soroban mainnet, \$11K/month processed at peak, HackQuest as a paying enterprise client, \$100K Stellar Community Fund grant, Stellar Build Better hackathon win.

Stack: Rust, Soroban, Go, TypeScript, Node.js, NestJS, PostgreSQL (pgcrypto), Redis, AWS (EKS, KMS), GCP (GKE), Docker, Kubernetes

Independent AI Pipeline Contractor, Parsewave

Feb 2026 - Present

Contracted work supporting evaluation and training pipelines for Anthropic and OpenAI Codex

- Evaluate frontier agentic model outputs (Claude Opus, GPT-5-class) against a defined performance bar to identify where models underperform relative to a top-tier human baseline.
- Design rubrics and architect pipelines that generate tasks specifically targeting discovered weaknesses, so models can be evaluated and retrained against them using golden tasks.
- Progressed from a single-model pipeline to multi-model pipelines with stepwise generation across 5+ sequential steps, where each step sees only the previous step's output and must continue coherently from it.
- Built a multimodal pipeline covering audio and video based tasks for agents, extending the same methodology beyond text and code.

Stack: Python, LLM evaluation tooling, multi-agent orchestration, rubric and pipeline design

- Built a RAG-based triage service from scratch in Python, served through FastAPI endpoints integrated with Confluence documentation and Jira ticket data, that cut bug resolution from about a week to a day.
- Designed real-time Snowflake data pipelines on AWS that cut manual reporting effort by over 60% across the division.

Stack: *Python, FastAPI, Spring Boot, AWS, Snowflake, Jira/Confluence API*

PROJECTS

AgentOps (AOPS) | AI Agent Control Plane | 2026

AI agent governance product built on MCP (Model Context Protocol): a testnet control plane for teams operating autonomous agents, covering agent identity, runtime credentials, policy enforcement, human approvals, and Circle Agent Wallet USDC treasury execution across five testnet chains, exposed through a hosted MCP service with an eight-tool runtime contract and hash-chained audit evidence.

Stack: *Next.js, Fastify, PostgreSQL, Redis, Circle Agent Wallet, MCP*

Pods | Nimiq | 2026

NIM-backed group accountability mini app for Nimiq Pay: participants commit funds upfront, submit evidence for scheduled activities, and receive deterministic proportional settlement after creator review, verified end to end on a physical two-wallet testnet run.

Stack: *Node.js, Nimiq RPC, Docker, worker/web split architecture*

OpenAssets | Mantle | 2025

Open-source RWA execution layer with ERC-3643 (T-REX) on-chain compliance and mETH-collateralized leverage vaults, bridging institutional asset flows into DeFi. Won VietBuild U2U and Mantle Global Hackathon.

Stack: *Solidity, ERC-3643, EVM, TypeScript, Redis*

Kredio | Polkadot | 2024 - 2026

On-chain credit layer combining EVM and PolkaVM atomic calls with XCM cross-chain scoring across parachains. Polkadot Honorary Award as a newcomer to Substrate.

Stack: *ink! (Wasm), Solidity, Polkadot XCM*

Agent Brain | AI Agent Orchestration (MCP) | Personal Infrastructure | 2026

Converted a personal machine into an AI agent orchestrator running Claude Code and Codex in parallel. Built a Next.js-based session service and an MCP (Model Context Protocol) based communication layer so multiple independent AI agents coordinate work, with connectors to local apps, Notion, and Discord to maintain a durable history of actions and support group collaboration.

Stack: *Next.js, MCP, Claude Code, Codex, Notion API, Discord API*

HACKATHONS & EDUCATION

5 hackathon wins: Stellar Build Better (1st), VietBuild U2U, Mantle Global Hackathon, Pharos Builder Camp (3rd), Polkadot Honorary Award. Plus \$100K Stellar Community Fund grant.

Indian Institute of Information Technology Guwahati, B.Tech Computer Science and Engineering | Nov 2022 - Jul 2026 | CGPA: 9.1 / 10.0