

Ujjwal Paswan

BACKEND & AI ENGINEER

Bengaluru, India

Backend Engineering | Distributed Systems | AI Engineering | Product Architecture

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Profile

Software engineer with 3.5+ years of experience across backend engineering, enterprise AI, distributed systems, and end-to-end product architecture. At SLK Software, own backend and AI engineering for an enterprise legacy-modernization platform, including LLM workflows for source code and documentation beyond individual model context windows. As Co-founder & CTO of Nepfa, architected and shipped a production multi-vendor marketplace from zero in approximately three months, owning architecture, domain modeling, search, authorization, cloud infrastructure, web platforms, and mobile products.

Experience

Co-founder & CTO

Jun 2026 – Present

Nepfa Group Private Limited

Bengaluru, India

Product Architecture Backend OpenSearch AWS RBAC Web + Mobile

- Architected and shipped a production multi-vendor marketplace from scratch in approximately three months, owning system design, backend services, database architecture, APIs, search, cloud infrastructure, security, web, mobile, and release engineering.
- Designed the platform across customer storefront, vendor portal, admin/back-office, iOS, and Android, covering catalog, vendors, customers, orders, returns, fulfillment, inventory, finance, marketing, support, analytics, and risk operations.
- Designed the commerce domain around products, variants, SKUs, vendor listings, brands, categories, attributes, pricing, and inventory, separating canonical catalog data from vendor-specific commercial data.
- Built catalog workflows for bulk imports, validation, duplicate detection and merging, moderation, approvals, publishing, brand/category authorization, and inventory operations.
- Designed OpenSearch-backed product discovery with query-aware ranking, configurable search rules, merchandising controls, and search insights, separating discovery from transactional workloads.
- Designed a 99-permission authorization model across 17 functional domains with roles, data scopes, sensitive actions, approval workflows, audit trails, feature flags, and administration.
- Modeled controlled workflows for orders, fulfillment, returns, refunds, financial adjustments, vendor authorization, coupon funding, risk rules, and operational approvals.
- Deployed the production platform on AWS behind Application Load Balancer with autoscaling-oriented infrastructure designed to scale with traffic and operational workloads in the thousands of users.
- Owned technical decisions from requirements and domain design through implementation, CI/CD, production debugging, security, performance, and release management.

Live Product: [Nepfa Web](#) | [iOS](#) | [Android](#) | Nepfa Brands: [iOS](#) | [Android](#)

Software Engineer – AI & Backend

Sep 2023 – Present

SLK Software

Bengaluru, India

AI Systems Node.js Python OpenAI Enterprise

- Core engineer on AIWIZ, an AI-powered legacy-modernization platform used in enterprise engagements including NYL and FHN, with ongoing work involving Primerica.
- Designed and implemented Node.js/NestJS backend services for code parsing, refactoring orchestration, migration workflows, and integrations supporting large COBOL codebases.
- Designed AI pipelines for source code and documentation that exceeded individual LLM context windows, using logical chunking, intermediate aggregation, and multi-stage processing to preserve continuity across large files and repositories.
- Integrated OpenAI models into repeatable analysis and transformation workflows with validation, retries, failure handling, and batch-oriented processing.
- Reduced manual engineering effort by approximately 40% through automation of repetitive modernization tasks and reduced defects by approximately 30% through stronger API contracts, validation, and integration hardening.
- Owned backend services, AI workflows, integrations, debugging, and production-facing engineering responsibilities; recognized internally as Best New Recruit.

Engineering Depth

Marketplace Domain Architecture

Designed product, variant, SKU, seller-offer, brand, category, attribute, inventory, and pricing relationships to separate shared catalog data from vendor-specific commercial data.

Search & Discovery

Designed OpenSearch-backed discovery with query-aware ranking, search rules, merchandising controls, and search insights.

Authorization & Governance

Designed a 99-permission authorization model across 17 functional domains with roles, data scopes, sensitive actions, approvals, auditability, feature flags, and administrative controls.

Commerce Workflow Design

Modeled controlled states for orders, fulfillment, returns, refunds, financial adjustments, vendor authorization, coupon funding, risk, and platform approvals.

Cloud Architecture

Designed AWS deployment around Application Load Balancer and autoscaling-oriented infrastructure for growing traffic and operational workloads.

Large-Context AI Systems

Engineered LLM pipelines for source code and documentation beyond model context limits using partitioning, intermediate summaries, aggregation, and multi-stage processing.

Earlier Experience

Software Engineer (Contract) – Backend & Integrations

Feb 2023 – Mar 2023

Mevi

Remote

- Improved backend APIs and service integrations through stronger logging, error handling, diagnostics, and edge-case coverage.

Full-Stack Engineer – Vehicle Rental Platform

2022 – 2023

MotoGhar

Remote

- Built an end-to-end vehicle rental platform using Next.js, NestJS, GraphQL, PostgreSQL, AWS S3, Tailwind CSS, and Zustand, owning backend schema design, business logic, APIs, and frontend integration.
- Improved page-load performance by approximately 30% through better data fetching, caching, image handling, and component-level optimization.

Technical Skills

Languages TypeScript, JavaScript (ES6+), Python, SQL

Backend Node.js, NestJS, Express.js, FastAPI, REST, GraphQL

Architecture Microservices, modular monoliths, distributed systems, API design, domain modeling, RBAC, workflow systems

AI Engineering OpenAI APIs, LLM integration, prompt engineering, context-window-aware processing, AI automation, batch processing

Data & Search PostgreSQL, MySQL, MongoDB, Redis, OpenSearch, indexing, query optimization

Cloud & DevOps AWS, S3, EC2, ALB, Docker, CI/CD, GitHub Actions, Azure DevOps

Frontend Next.js, Zustand, Tailwind CSS, responsive UX, performance optimization

Recognition & Leadership

- Best New Recruit – SLK Software:** recognized for early ownership of critical AIWIZ backend and AI engineering work.
- Conduct technical training sessions for engineering students at Dr. Ambedkar Institute of Technology covering full-stack development, modern JavaScript/TypeScript, and backend engineering.

Education

B.E. – Computer Science & Engineering

2019 – 2023

Sri Krishna Institute of Technology, Bengaluru