

PRATYUSH MAHAPATRA

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SUMMARY

Senior Frontend Engineer with 5+ years of experience building complex SaaS and enterprise applications with React, Next.js, and TypeScript. Experienced in frontend architecture, real-time applications, performance optimization, data-heavy interfaces, and AI-powered products, with strong full-stack depth across backend, cloud, and distributed systems.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, SQL

Frontend: React, Next.js, Redux Toolkit, Context API, Tailwind CSS, shadcn/ui, Radix UI, Ant Design, Mantine, Recharts, Three.js, React Three Fiber, tldraw, React Hook Form, dnd-kit

Frontend Engineering: Frontend Architecture, Design Systems, State Management, Performance Optimization, Responsive UI, Real-time Applications, Data Visualization

Backend: Node.js, Express, FastAPI, REST APIs, SSE, WebSockets, Async Processing, Queue-based Processing

AI/ML: PyTorch, ComfyUI, Flux, SDXL, LoRA, LLM APIs (OpenAI, Gemini, Claude), Hugging Face Inference

Databases: PostgreSQL, MongoDB, MySQL, Redis, Pinecone, Weaviate

Cloud & Infrastructure: AWS (S3, EC2), GCP (Cloud Run), Azure (Web Apps, VMs, Redis, Service Bus), Firebase, Docker, GitHub Actions, CI/CD, RunPod, Replicate

EXPERIENCE

Collective Artist Network (Galleri5)

Senior Software Engineer

Bengaluru, India

Aug. 2025 – Present

- **G5 AI Studio:** Owned frontend architecture and delivery for an enterprise generative-AI platform using React 19, Next.js, and TypeScript, building complex production workflows, reusable UI systems, and real-time creative tooling.
- Built and shipped **aistudio-mcp**, an MCP server exposing AI Studio's Model Garden to Claude Code and other MCP clients, with model discovery, cost estimation, credit-confirmed generation, async job tracking, media uploads, result retrieval, org-scoped authentication, and reusable MCP prompts.
- Led a 3-engineer frontend team, owning architecture and product implementation while managing 3 engineers and collaborating directly with the CTO, directors, and producers.
- Led frontend development while contributing across the full stack for AI Studio's filmmaking module on Azure, collaborating with Microsoft's ISE team to build production workflows for feature films, episodic series, and AI-enabled micro-dramas, including asset lifecycle management, retrieval systems, and human-in-the-loop review workflows using Azure Web Apps, VMs, Redis, and Service Bus.
- Built real-time AI workflows using Firestore subscriptions, authenticated SSE streaming, and WebSockets, supporting concurrent generations, streaming chat, cancellation, regeneration, optimistic updates, and live credit tracking.
- Built a 52K+ LOC node-based film production canvas with tldraw, implementing 10 custom shapes, custom bindings, viewport-aware media loading, persistence, bulk selection, and workflow-specific interactions.
- Optimized media-heavy workflows with responsive image derivatives, lazy loading, viewport-aware loading, CDN-backed video streaming, and a FIFO playback semaphore limiting concurrent video decoding to 4 to keep large production boards responsive.

Autonomix Solutions – SurgiLink

Full-Stack Developer (Contract)

Remote

Sep. 2024 – Dec. 2024

- Architected and built a healthcare workflow platform from scratch using Next.js and TypeScript, personally owning UI/UX, frontend/backend architecture, and leading a team of 3 engineers across appointment, OT-block, patient/doctor scheduling, and billing workflows.
- Built dynamic pre/post-operative checklist and billable-time workflows using RJSF, dnd-kit, Mantine, and React Hook Form, while integrating a legacy MS Access database through server-side workers; deployed the platform to a dental hospital chain in Australia.

Gumlet

Senior Frontend Engineer

Bengaluru, India

Sep. 2023 – May 2024

- Architected and built a 20+ screen video analytics platform covering streaming, uptime, monetization, and advertising analytics, processing datasets of up to 1M data points/hour.
- Engineered responsive real-time visualizations using WebSockets, aggregation, downsampling, batching, chart windowing, pagination, and memoization to efficiently render large-scale analytics data.
- Improved dashboard load performance by 35% through code-splitting and lazy loading, optimizing frontend delivery and runtime rendering.
- Led a rewrite of a 3-repository microfrontend platform from Pug/Express to Next.js with a 2-engineer team, migrating selected backend routes and introducing server-side data handling for improved data privacy.

Procuzy

Frontend Engineer – ERP Systems

Bengaluru, India

Mar. 2023 – Sep. 2023

- Built ~60% of the frontend across core ERP workflows including inventory, procurement, sales, expenses, reporting, multi-warehouse operations, and BOM/manufacturing within a 5-engineer team.
- Designed state architecture using React Context and Redux Toolkit, resolving cross-module state inconsistencies across warehouse, inventory, filters, and reporting workflows and reducing related bug reports by 50%.
- Built Shopify and Tally integration workflows covering authentication, field mapping, synchronization controls/status, error handling, and product/order/inventory synchronization.

Mikelegal

Frontend Engineer

Remote

Mar. 2022 – Oct. 2022

- Led a full migration of a legacy React 15 + JavaScript codebase to TypeScript, introducing TypeScript-based modules and architectural improvements while reducing build time from ~3 minutes to ~1 minute.
- Established a reusable component workflow for PDF/document manipulation and state management; audited and consolidated ~15% redundant component code and standardized Storybook examples, reducing engineer onboarding time by 40%.

Squareware

Full-Stack Developer

Remote

Sep. 2021 – Feb. 2022

- Built frontend foundations from the ground up for an appointment-management platform and an odd-jobs marketplace within a 5-engineer team using React and Next.js.
- Re-architected a legacy React application with Next.js, improving build times and LCP performance by ~30%.

PROJECTS

NSE Data Extractor & VCP Analyzer | Node.js, JavaScript, CLI

- Built a Node.js CLI that fetches NSE stock data with session handling, retries, rate-limit delays, configurable timeframes, and automatic chunking for periods exceeding the NSE API's 1-year request limit; added daily/weekly Volume Contraction Pattern analysis using moving averages, price/volume contraction, base formation, and breakout criteria.

Movie Script Small Language Model | PyTorch, Transformers, Hugging Face

- Designed and trained a 50–60M parameter GPT-style transformer from scratch, building the training pipeline and training on 1,100+ movie scripts (~127M tokens) with Flash Attention, mixed precision, and cosine learning-rate scheduling; achieved ~1.7 validation loss and published model weights on Hugging Face.

EDUCATION

Sambalpur University

Bachelor of Technology in Computer Science, CGPA: 8.04/10

India

2022

AWARDS

Smart Odisha Hackathon – Runner-Up | VSSUT Innobuzz Hackathon – 1st Place, Healthcare Category | Hackout 22 – Top 10 Finalist