Er. pratik sharma

Full-Stack Software Engineer

Butwal, Nepal | pratiksharma2061@gmail.com | +977 9840697481 | pratiksharma.info.np
github.com/pratik2061 | linkedin.com/in/pratik-sharma-937909290

PROFESSIONAL SUMMARY

Full-stack engineer with a backend, real-time media, and DevOps focus (B.E. Computer Engineering, 2026). Experienced in building scalable WebRTC/SFU streaming platforms, NestJS/Express APIs, and PostgreSQL/MongoDB schemas, with production security hardening (CSRF, Redis rate limiting, OAuth). Containerizes services with Docker and ships automated CI/CD pipelines.

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, SQL
Backend: Node.js, NestJS, Express.js, FastAPI, REST APIs
Real-Time & Media: LiveKit SFU, WebRTC, Socket.IO, WebSockets, Audio/Video Track Lifecycle, Screen Sharing
Security & Auth: JWT (HttpOnly Cookies), Google OAuth 2.0, Double Submit CSRF, Rate Limiting (Throttler), Helmet, RBAC
Frontend & State: React 19, Vite, TanStack Query, Zustand, Redux, Tailwind CSS v4, HTML5, CSS3, Recharts
Databases & DevOps: PostgreSQL, MongoDB, Redis, Prisma ORM, TypeORM, Docker, GitHub Actions, Linux, Cloudflare R2

EXPERIENCE

Backend & DevOps Engineer (Software Engineer) Nov 2025 – Present
SynthBit *Butwal, Nepal*

- Designed normalized PostgreSQL/Prisma schemas for Attendance (AMS) and Consultancy (CMS) systems serving 500+ students.
- Optimized slow REST list/report endpoints with indexes, field selection, and pagination, cutting latency and payload size.
- Implemented JWT authentication, RBAC middleware, and Zod validation to reject malformed requests at the API boundary.
- Containerized services with Docker; built GitHub Actions CI/CD pipelines that deploy to VPS on merge.
- Provisioned and secured production Linux servers (Azure VMs, Hostinger VPS) with reverse proxy, SSL/TLS, and firewall rules.

Frontend Developer Intern Jan 2025 – Mar 2025
Refobe *Kathmandu, Nepal*

- Built responsive, reusable React components with Tailwind CSS for client projects, keeping the UI consistent.
- Integrated REST APIs with TanStack Query for caching, avoiding redundant requests and handling loading/error states.

PROJECTS

Meet-Up | *LiveKit SFU, WebRTC, NestJS, React 19, Redis, MongoDB* Live Demo | Code

- Architected a scalable video conferencing platform, migrating from mesh WebRTC to a LiveKit SFU to eliminate $O(N^2)$ client bandwidth bottlenecks; supports HD streaming, dynamic track subscriptions, and screen sharing.
- Hardened security with Double Submit CSRF (auto-renewing Axios interceptors), Redis-backed rate limiting, Helmet, and a one-time auth code flow (30s Redis TTL) that fixed cross-domain OAuth cookie drops.

SynthBit PTE Pro | *React, Node.js, Express, Python, PostgreSQL, REST APIs* Live Demo

- Architected a multi-tenant PTE preparation platform, preventing cross-tenant data leakage with tenant-scoped PostgreSQL schemas and RBAC; serves 300+ active students.
- Kept the Node.js API responsive during heavy AI speech/writing evaluation by decoupling it from Python inference pipelines.

KrishakMart | *React, Node.js, Express, PostgreSQL, Prisma, Tailwind CSS* Live Demo | Code

- Built an agricultural marketplace that removes middleman margins, with normalized PostgreSQL/Prisma schemas for products, orders, inventory, and dual-role portals.
- Prevented stock race conditions in concurrent orders with ACID transactions; used TanStack Query caching to reduce mobile network payloads for rural users.

MoodTune AI | *React, Python, FastAPI, TensorFlow, CNN, YOLO* Live Demo | Code

- Reduced real-time emotion recognition latency by pairing YOLO face detection with a custom CNN trained on FER-2013, reaching 70% validation accuracy across 7 emotions.
- Served inference via FastAPI microservices that deliver mood-matched music recommendations with low overhead.

EDUCATION

Lumbini Engineering College Tilottama, Bhairahawa, Nepal
Bachelor of Engineering in Computer Engineering *2022 – 2026*

- Coursework: Data Structures and Algorithms, DBMS, Operating Systems, Computer Networks, Software Engineering