JYOTIRMAY GUPTA

BACKEND SOFTWARE ENGINEER

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Software engineer with nearly two years of full-time experience in backend APIs, microservices and production deployments across healthcare, financial applications and voice platforms.

PROFESSIONAL EXPERIENCE

Shyphan AI Solutions | Noida, India

Full Stack Engineer — Apr 2026 - Present

- Engineered **Node.js/TypeScript microservices** for ORBS using PostgreSQL, Redis and RabbitMQ; enforced service boundaries with ESLint and added Winston logging and **OpenTelemetry/SigNoz** observability.
- Implemented an **API gateway** with JWT validation, silent refresh, session anomaly detection, three-tier Redis rate limiting, reverse proxy routing, **Swagger documentation** and security/integration tests.
- Strengthened **admin RBAC** with Redis-cached grants, fail-closed guards, **TOTP MFA**, encrypted secrets, backup codes and step-up re-authentication for sensitive actions.
- Enabled **FIDO2/WebAuthn passwordless login** with attestation verification, expiring Redis challenges, credential public-key storage, replay-counter checks and OTP fallback.
- Designed a standalone **notification microservice**, decoupling domain services through **Zod-validated RabbitMQ events** with five domain queues, delayed retries and dead-letter routing.
- Orchestrated **email, SMS, WhatsApp, FCM push and in-app delivery** with bilingual Handlebars templates, preference checks, REST inbox APIs and **Socket.IO** updates.
- Automated **CI/CD with GitHub Actions**, Trivy scans and GHCR image publishing; configured health-gated deployments, **automatic rollback** and pre-migration backups.
- Developed a **multi-tenant FastAPI backend** for Voice Hub campaigns, contacts, calls and wallet billing using **PostgreSQL, SQLAlchemy and Pydantic**, secured with JWT/RBAC.
- Integrated **Ultravox, Twilio and Plivo** for outbound calling, webhooks and call lifecycle tracking; scheduled asynchronous campaign workflows with **Celery and APScheduler**.

Quadb Technologies | Ludhiana, India

Software Developer (SDE 1) — Nov 2024 - Mar 2026

- Delivered **JWT-secured REST APIs** for Genius CFO using **Python/FastAPI**, Pydantic, Node.js, TypeScript, PostgreSQL and Redis in a microservices architecture.
- Connected **LangChain agents** to ChatGPT and Claude APIs; implemented **Qdrant-based RAG** with OpenAI embeddings for financial automation workflows.
- Deployed Python microservices on **DigitalOcean** using **Docker, Nginx and AWS S3**.
- Authored a **TypeScript SDK** for mini-app integrations and backend services for **DiFinance**.

Software Developer Intern — Aug 2024 - Nov 2024

- Created the **MERN-based dDate application** using **React hooks and Context API**.

TECHNICAL SKILLS

Backend: JavaScript, TypeScript, Python, Node.js, Express.js, FastAPI, Pydantic, REST APIs, Microservices
Data and processing: PostgreSQL, MongoDB, Redis, RabbitMQ, SQLAlchemy, Celery, APScheduler
Frontend: React.js, Next.js, Redux/Redux Toolkit, HTML, CSS, Material UI, Tailwind CSS
Delivery and integrations: Docker, Git/GitHub, GitHub Actions, DigitalOcean, AWS S3, Nginx, Socket.IO
AI applications: LangChain, Qdrant, RAG, ChatGPT/OpenAI APIs, Claude APIs

EDUCATION

Lovely Professional University | Punjab, India

Bachelor of Computer Applications — Sep 2022 - May 2025