

PAYAL YADAV

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PROFESSIONAL SUMMARY

Backend Engineer skilled in building scalable backend systems, REST APIs, microservices, and real-time applications using Node.js, MERN Stack, Python, Django, FastAPI, and TypeScript. Experienced with MongoDB, PostgreSQL, Redis, Docker, WebSockets, system design, authentication, cloud deployment, and performance optimization. Solved 1000+ Data Structures & Algorithms (DSA) problems across competitive programming and coding platforms with strong problem-solving and analytical skills. Passionate about building secure, maintainable, high-performance, and production-ready enterprise applications.

TECHNICAL SKILLS

Programming Languages: JavaScript (ES6+), TypeScript, Python, C++

Data Management: SQL, MySQL, Redis, MongoDB

Backend Development: Node.js, Express.js, FastAPI, Django, DRF, REST APIs

Frontend Development: HTML, CSS, Tailwind CSS, Bootstrap, React.js, Zustand

Security & Authentication: OAuth 2.0, JWT, API Security, RBAC

Tools & Technologies: Git, GitHub, Postman, Prisma ORM, RabbitMQ, BullMQ

WORK EXPERIENCE

Backend Developer (LANWAY)

- Designed and developed the complete backend architecture for [Lanway Website](#) using Node.js, Express.js, MongoDB, and Redis, building 50+ scalable REST APIs and improving API response efficiency by 40%.

- Implemented secure authentication and enterprise-grade Role-Based Access Control (RBAC) with JWT, refresh tokens, permission
- Built a comprehensive Employee Management System supporting 500+ employee records with modules for employee profiles, attendance tracking, department management, task workflows, and role-based access control.
- Optimized backend performance and reliability using Redis caching, API validation, rate limiting, centralized error handling, and logging, reducing server response time by 35% and improving system scalability for production workloads.

PERSONAL PROJECTS

Full Stack Development (BABY MART)

- Developed a full-stack e-commerce platform for BabyMart featuring a modern customer website, powerful admin dashboard, and scalable backend architecture using MERN Stack technologies.
- Implemented secure authentication and Role-Based Access Control (RBAC) with protected dashboards, user permissions, admin management, and JWT-based authorization workflows.
- Integrated online payment systems using [Stripe](#) with secure checkout, order management, invoice generation, and real-time payment processing features.
- Built advanced inventory and product management modules including stock tracking, order handling, analytics dashboards, invoice systems, and scalable REST APIs optimized for production performance.

Backend Development (AI-Powered Project Management System)

- Designed and developed a scalable backend architecture for an AI-powered Project Management System using Node.js, Express.js, MongoDB, and Redis with modular and production-ready APIs.

- Implemented secure authentication and Role-Based Access Control (RBAC) with JWT, team permissions, workspace management, and protected project collaboration workflows.
- Built AI-integrated project features including smart task recommendations, automated workflow management, project analytics, and intelligent productivity tracking.
- Developed core project management modules such as task assignment, team collaboration, real-time notifications, deadlines, activity tracking, and workspace management dashboards.
- Optimized backend performance and system reliability using Redis caching, centralized error handling, API validation, logging, rate limiting, and scalable database architecture for high-traffic environments.

Backend Development (AlgoX — Coding Platform)

- Designed and developed scalable backend APIs for AlgoX, a LeetCode-style coding platform, using Node.js, Express.js, MongoDB, and Redis with production-ready architecture.
- Implemented secure authentication and Role-Based Access Control (RBAC) with JWT, protected APIs, user management, admin controls, and permission-based access workflows.
- Built core coding platform features including problem management, code submission APIs, test case execution workflows, coding contests, leaderboard systems, and user progress tracking.
- Optimized backend performance and scalability using Redis caching, API validation, centralized error handling, logging, rate limiting, and scalable REST API architecture for high-concurrency environments.

FREELANCE PROJECTS

Backend Development (Cafe Mart — Scalable E-Commerce Platform)

- Designed and developed a microservices-based backend architecture for Cafe Mart capable of supporting 100K+ users with scalable, distributed, and production-grade system design.
- Implemented event-driven architecture using message queues, WebSockets, and real-time communication systems for live order updates, notifications, inventory synchronization, and user activity tracking.
- Built secure authentication and Role-Based Access Control (RBAC) with JWT, API Gateway management, service-to-service communication, and scalable REST APIs across multiple backend services.
- Optimized high-performance infrastructure using Redis caching, Docker, centralized logging, rate limiting, monitoring, load balancing, and scalable database architecture to ensure reliability and low-latency performance.

EDUCATION QUALIFICATION

Chandigarh University

Master of Computer Applications (MCA)

Punjab, India | CGPA: 7.2 | Graduating in 2025

ACHIEVEMENTS & CERTIFICATIONS

Solved 1000+ DSA problems across multiple coding platforms.

Solved 100+ React, Python, and SQL problems in hackathons and coding challenges.

