SHANTNU

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SUMMARY

Full Stack (MERN & PERN) Software Engineer with 4+ years of experience designing and scaling REST APIs, distributed services, and cloud-native systems. Strong background in building secure microservices, optimising database performance, implementing monitoring & observability, and deploying production workloads on AWS and Azure. Experienced in working with SQL and NoSQL data stores, caching layers, and CI/CD pipelines. Comfortable collaborating with cross-functional stakeholders and leading small engineering teams. Actively exploring Python-based backend ecosystems for data platforms and open-source projects.

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SKILLS

Backend & API's :	Node.js, Express.js, PHP, REST API design, JWT authentication, Microservices architecture, Python(FastAPI)
Data & Databases :	MongoDB, PostgreSQL, MySQL, MS SQL Server, Redis, Indexing, query optimisation, caching strategies, Data modelling & normalisation
Data Engineering :	Scheduled jobs (cron / workers), Data ingestion APIs, Batch & real-time processing
DevOps & Infrastructure :	Docker, Kubernetes, CI/CD (GitHub Action), AWS, GCP, Azure, Load balancing, autoscaling, Linux (Ubuntu Server, bare metal)
Observability & Security :	Azure Monitor, logging, metrics, JWT, RBAC, API security best practices
Frontend:	ReactJS, NextJS, HTML, CSS, JavaScript, Bootstrap, Tailwind CSS

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EXPERIENCE

Sr. Software Developer | INFLIBNET Centre | New Delhi | September 2024 – Present
- Designed and maintained scalable REST APIs serving 1,000+ concurrent users using Express.js and MongoDB, reducing average response times by 30%.
- Built and deployed microservices on Azure with JWT-based authentication and role-based access control, improving system security and service isolation.
- Implemented caching layers and database indexing strategies, improving API throughput by 50% and reducing infrastructure cost by 28%.
- Integrated application metrics and logs using Azure Monitor to improve observability and proactively detect performance bottlenecks.
- Led backend development of an AI-powered Q&A platform using LangChain and Node.js, managing data ingestion from web sources and coordinating a 4-member engineering team.
- Collaborated with product and frontend teams to convert business requirements into technical specifications and delivery roadmaps.

IT Consultant | AICTE, Ministry of Education | New Delhi | December 2021 - August 2024
- Analysed system performance and optimised backend services, reducing server load by 15% through query optimisation and caching.
- Designed backend services and data models for a React + MongoDB analytics dashboard used by 200+ concurrent users.
- Built internal tools for data export/import and reporting workflows.
- Authored technical documentation for backend systems and deployment processes to streamline onboarding.
- Developed a performance scoring and leaderboard system using backend business logic and database aggregation queries.

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EDUCATION

Pursuing **Master of Business Administration** | Operations & IT |Lovely Professional University | 2024-2026

Bachelor of Technology | JSS Academy of Technical Education (affiliated to Dr. A. P. J. Abdul Kalam Technical University, Lucknow) | 2017 – 2021

12th | **PCM** | Prabhu Dayal Public School, Delhi| CBSE | 2017

10th | Prabhu Dayal Public School, Delhi | CBSE | 2015

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OPEN SOURCE & PERSONAL PROJECTS

- **SparkyFitness:** An open-source fitness tracking and management platform for nutrition, workouts, and body metrics. Contributed 20+ commits improving backend stability, API endpoints, and performance optimisations. Worked with maintainers to debug production issues and enhance data models.
- **Blogging Website (MERN Stack):** Developed a full-stack blogging website using MongoDB, Express.js, Next.js, Node.js, and Tailwind CSS. Implemented an admin dashboard with secure authentication middleware to manage blog posts (CRUD operations) via protected routes.
- **Movies List Application (Next.js & MongoDB):** Created an open-source movie listing application using Next.js for both frontend and backend, with data stored in MongoDB. Features an admin dashboard with authentication and protected routes for managing movie data fetched from the IMDB API.
- **Suduko:** Developed an open-source Sudoku game using vanilla JavaScript and CSS. The application features real-time input validation, dynamic puzzle generation, and a one-click solution.
- **Online Code Editor (HTML, CSS, JS):** Designed and implemented a web-based HTML, CSS, and JavaScript code editor, enabling users to write and execute code directly within the browser and hosted on Vercel.
- **Minify Code:** Created a website to reduce code size by removing whitespace and unnecessary characters.
- Architected and managed a production-grade homelab environment on a Dell R420 server, deploying and operating containerised services via Docker, implementing secure reverse proxy routing, observability with GoAccess, and automated CI/CD pipelines using GitHub Actions for continuous service deployment and infrastructure experimentation.

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CERTIFICATIONS

- Google Analytics for Power Users
- Google Web Designer Basics
- Google Tag Manager Fundamentals
- Advanced Google Analytics
- Getting Started With Google Analytics 360
- Introduction to Data Studio
- Basics of Java
- React JS from Great Learning
- PHP from Great Learning