VISHWAJEET KUMAR

SOFTWARE ENGINEER

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[LinkedIn](#) | [Github](#) | [Portfolio](#) | [Leetcode](#)

PROFESSIONAL SUMMARY

Backend Software Engineer with experience designing distributed, low-latency systems using Node.js, Redis, PostgreSQL, WebSockets, and AWS. Built production-grade backends handling concurrent users and real-time state updates. Strong in data structures, system design fundamentals, and scalable backend architecture.

TECHNICAL SKILLS

- **Languages:** Python, JavaScript (ES6+), Java, C#
- **Backend Development:** Node.js, Express, NestJS, FastAPI, REST, WebSockets, Microservices
- **Frontend Development:** Next.js, React.js, Tailwind CSS
- **Data & Caching:** PostgreSQL, MongoDB, Redis, Firebase
- **Cloud/DevOps:** AWS EC2, AWS S3, AWS RDS, Docker, Git, GitHub, CI/CD, GitHub Actions
- **Security:** JWT, RBAC (CASL)
- **Data Structures & Algorithm:** Solved 380+ DSA problems on LeetCode

PROJECTS

Real-Time Multiplayer Gaming Platform (Distributed Backend System)

Node.js (Express), PostgreSQL, Redis, AWS, Socket.IO

- Designed and implemented a real-time distributed backend supporting concurrent multiplayer sessions.
- Used Redis for in-memory state management to ensure atomic operations and prevent race conditions.
- Built room-scoped WebSocket communication for low-latency state synchronization.
- Implemented reconnection handling for unstable client networks.
- Deployed stateless services on AWS, enabling horizontal scaling.

Distributed URL Shortener

Node.js / FastAPI, PostgreSQL, Redis, AWS

- Developed a scalable URL shortening service optimized for high read traffic.
- Implemented Redis caching to reduce database load and improve redirect latency.
- Designed collision-resistant short URL generation with indexed database queries.
- Added rate limiting and abuse prevention mechanisms.
- Documented system design trade-offs including cache consistency and availability.

AI-Powered Code Review & PR Analysis System

FastAPI, OpenAI / Gemini, RAG, Vector Embeddings

- Built an AI-powered system to analyze GitHub pull requests for code quality, security risks, and complexity.
- Implemented RAG-based pipelines using embeddings to evaluate code against best practices.
- Generated actionable review summaries to assist developers during code reviews.
- Designed modular APIs to support multi-repository and multi-language analysis.

WORK EXPERIENCE

Software Developer Intern, StuFit Approach Pvt. Ltd., Lucknow   July 2025 - September 2025

- Built and deployed a scalable healthcare backend using NestJS and PostgreSQL serving 2,000+ users.
- Implemented JWT-based authentication and role-based access control (RBAC).
- Optimized APIs and queries, reducing latency by 30%.
- Worked in Agile teams, reducing production issues by 20%.

EDUCATION

Bachelor of Technology in Computer Science and Engineering (AI Specialization)

University of Lucknow | SGPA: 8.10 | Nov 2022 – Present