# VISHWAJEET KUMAR

**Software Engineering (Fresher) | Backend & Distributed Systems**

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LinkedIn | Github | Portfolio | Leetcode

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## PROFESSIONAL SUMMARY

Software Engineer with strong foundations in computer science and hands-on experience building scalable, highly available backend systems. Experienced in designing RESTful services, distributed systems, and cloud-native applications using Java, Python, and modern backend frameworks. Proven ability to own services end-to-end in production, optimize performance, debug live systems, and contribute to reliable, customer-facing platforms.

## TECHNICAL SKILLS

- **Languages:** Java, Python, JavaScript, TypeScript
- **Backend & Distributed Systems:** Node.js, NestJS, REST APIs, Microservices, Caching, Rate Limiting, Horizontal Scaling, Fault Tolerance
- **Databases & Storage:** PostgreSQL, Redis, MongoDB
- **Cloud & DevOps:** AWS (EC2, S3, RDS), Docker, CI/CD (GitHub Actions), Git
- **Reliability & Operations:** Performance Optimization, Monitoring, Incident Debugging
- **Testing & Quality:** Unit Testing, API Testing, Debugging, Code Reviews
- **Core CS:** Data Structures & Algorithms (400+ problems), OOPS, System Design

## WORK EXPERIENCE

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

- Designed and implemented scalable backend services using NestJS and PostgreSQL supporting 2,000+ active users.
- Contributed to backend components end-to-end, including implementation, testing, deployment, and production support.
- Optimized database queries and API execution paths, reducing request latency by ~30%.
- Implemented secure authentication and role-based access control using JWT and RBAC.
- Debugged and resolved production issues, improving system stability and user experience.
- Collaborated with cross-functional teams in Agile development cycles.

## PROJECTS

**Real-Time Multiplayer Backend System** *[Node.js (Express), PostgreSQL, Redis, AWS, Socket.IO]*

- Built a distributed real-time backend system supporting concurrent users with low-latency interactions.
- Designed Redis-based in-memory state management to handle concurrency and prevent race conditions.
- Implemented room-scoped WebSocket communication for efficient real-time synchronization.
- Deployed stateless services on cloud infrastructure to enable horizontal scaling and fault tolerance.

**Distributed URL Shortening Service** *[Node.js / FastAPI, PostgreSQL, Redis, AWS]*

- Designed a high-availability backend service optimized for high read throughput and low-latency redirects.
- Implemented Redis caching, rate limiting, and indexed database queries to improve performance and reliability.
- Evaluated trade-offs between consistency, availability, and fault tolerance in a distributed system.

**AI-Powered Code Review & PR Analysis System** *[FastAPI, OpenAI / Gemini, RAG, Vector Embeddings]*

- Built an AI-powered system to analyze pull requests for code quality, complexity, and potential risks.
- Implemented RAG-based pipelines using embeddings to generate actionable insights.
- Designed modular APIs to support scalable analysis across repositories.

## OPEN SOURCE CONTRIBUTIONS

**LangChain — Open Source Contributor**

- Contributed to a production-grade open-source codebase by improving validation logic, inference workflows, and error handling.
- Added automated test coverage and collaborated with maintainers through structured code reviews.
- Worked with CI pipelines and production-quality codebases in a community-driven environment.

## EDUCATION

**Bachelor of Technology in Computer Science and Engineering (AI Specialization)**
**University of Lucknow** | SGPA: 8.10 | Nov 2022 – Present