NITIN KUMAR

New Delhi, India

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Education

Vellore Institute of Technology **2022 − 2026**
Bachelor of Technology in Computer Science and Engineering *CGPA: 8.79/10*

Technical Skills

Programming Languages: JavaScript, Python, Java, SQL
Backend Frameworks & Tools: Express.js, Spring Boot, Next.js, REST API, WebSocket, JWT
Databases: MongoDB, MySQL, PostgreSQL, database design, indexing, normalization
Cloud & DevOps: AWS (EC2, S3, Lambda), Git
Security: JWT authentication, HTTPS
Frontend Technologies: React.js, Redux, Tailwind CSS, HTML5, CSS3

Technical Projects

VShare - Secure Cloud File Sharing Platform | *Node.js, Express.js, MongoDB, AWS, Docker* **2025**
- Architected scalable backend API using Node.js and Express.js with three-tier security (public, password-protected, time-expiring links) processing 50+ daily transfers with 99.5% uptime and zero breaches
- Implemented AES-256 encryption, Bcrypt hashing, and secure session management with automated cron jobs for file cleanup and security audit logging
- Deployed containerized microservices with Docker and AWS S3 integration, achieving sub-100ms response times for 50+ concurrent users with RBAC and input sanitization

VChat - Real-Time Messaging Platform | *Node.js, Spring Boot, WebSockets, MySQL, Redis* **2025**
- Built WebSocket-based real-time chat backend supporting 30+ concurrent users using STOMP protocol with Redis caching, session management, and MySQL message persistence
- Optimized server architecture with connection pooling and Redis, improving message delivery by 40% while implementing rate limiting, DDoS protection, and OWASP security guidelines (XSS/CSRF protection)

Study Buddy - AI Educational Platform | *Python, Node.js, Gemini API, LangChain, PostgreSQL* **2025**
- Developed backend API integrating Google Gemini AI and LangChain for automated MCQ generation, PDF querying using RAG (Retrieval Augmented Generation), and ATS resume evaluation
- Implemented PostgreSQL with caching and query optimization, serving 25+ users with JWT authentication, rate limiting, error handling, and security monitoring following REST principles

Certifications & Training

- **Oracle Java Foundational Associate** (94%): Java SE, OOP, data structures, exception handling, collections

- **HackerRank SQL**: Advanced MySQL, query optimization, complex joins, subqueries, indexing, normalization

- **Cloud Computing - NPTEL Elite** (85%): Cloud architecture, AWS services (EC2, S3, Lambda), virtualization

- **Docker & Kubernetes** (Self-study): Containerization, orchestration, microservices, CI/CD integration

Achievements

- **Honeywell Hackathon 2024**: 4th place among 50+ teams developing secure IoT solution with real-time analytics and encrypted data transmission

- **LeetCode**: 400+ problems solved in data structures, algorithms, dynamic programming, system design

- **NDA Qualified 2023**: Cleared national-level examination demonstrating analytical and mathematical aptitude