

Harsh Gupta

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Education

University of Maryland, College Park

Masters of Engineering, Software Engineering

Aug. 2023 – May 2025

Shri Vaishnav Vidyapeeth Vishwavidyalaya

Bachelor of Technology, Computer Science and Engineering

Aug. 2017 – May 2021

Experience

Software Developer Intern

Center for Advanced Transportation Technology

Feb. 2024 – May 2025

College Park, MD

- Developed vector tile endpoints using Java for RITIS Map modernization; reduced map load times by 20%.
- Configured Nginx proxy for SSL termination, significantly boosting security and performance.
- Automated deployment processes with Ansible scripts, improving server management and monitoring by 30%, and created flexible playbook configurations for debugging and memory management.

Software Engineer

Tata Consultancy Services

Jul. 2021 – Jul. 2023

Pune

- Developed the gamification platform from scratch, designing and implementing backend APIs with Spring Boot and Java, while creating the frontend with Angular, enhancing user engagement by 50% for 40,000+ associates.
- Designed and optimized SQL queries to improve data retrieval performance, ensuring seamless interaction between the backend and PostgreSQL database.
- Developed REST API endpoints, incorporating authentication, authorization, and business logic.
- Led Static and Dynamic Application Security Testing (SAST & DAST), proactively identifying and resolving vulnerabilities.
- Configured and maintained Jenkins CI/CD pipelines, automating builds, testing, and deployments, reducing manual intervention by 40%.
- Integrated SonarQube for code quality analysis, fixing security vulnerabilities and ensuring adherence to best coding practices.

Projects

Microservices E-Commerce Platform | Spring Boot, PostgreSQL, MongoDB, Kafka, RabbitMQ, Prometheus, Grafana

- Developed a scalable, event-driven e-commerce platform using Spring Boot microservices, enabling seamless deployment and horizontal scaling.
- Integrated Kafka and RabbitMQ for asynchronous communication, and implemented observability with Prometheus and Grafana
- Enhanced reliability with Resilience4J (circuit breakers, retries, rate limiting) and enforced security best practices, including encryption and industry-standard authentication (JWT, OAuth2).

Upskilled | Java, Spring boot, React, MySQL, AWS (EC2, S3), Heroku (<https://upskilled.vercel.app>)

- Designed and implemented a full-stack Learning Management System for corporate learners; developed 50+ REST APIs supporting course management, submissions, and grading.
- Implemented role-based access control (Admin, Instructor, Employee) using Spring Security and JWT.
- Developed a cloud-integrated file upload system using AWS S3 for materials and assignment submissions.
- Developed and maintained comprehensive unit tests with JUnit, achieving over 85% code coverage and ensuring high reliability and maintainability of backend services.

Technical Skills

Languages & Frameworks: Java, Python, Spring Boot, Nodejs, Expressjs, JUnit, FastAPI

Data Management: MySQL, PostgreSQL, MongoDB (NoSQL), Elasticsearch

Web Development: HTML/CSS, JavaScript, Typescript, Angular, Reactjs, Redux, Swagger

Infrastructure & Tools: Git, Bitbucket, Jira, Docker, Kubernetes (Beginner), Ansible, Jenkins (CI/CD), Kafka, RabbitMQ, Eclipse, IntelliJ, Visual Studio, ZAP, Burp Suite, Wireshark

Cloud & OS: Amazon Web Services (S3, RDS, EC2), Windows, Mac, Linux, Unix

Software Development Principles: REST/SOAP, Microservices, Design Patterns, SDLC, Agile, SOLID Principles, Distributed Systems

Certifications: AWS Certified Cloud Practitioner, CodePath's TIP