Gelvesh Gangadhara Swamy

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Education

University of California, Riverside — Riverside, California
Master's in Computer Science ***(GPA: 3.77/4.0)*** — *Sep. 2024 – Mar. 2026*
- Relevant Courses: Design and Analysis of Algorithms, Database Management, Software Testing, Machine Learning

Dayananda Sagar College of Engineering — India
Bachelor of Engineering, Information Science & Engineering ***(GPA: 3.88/4.0)*** — *May 2017 – Jun. 2021*

Work Experience

Software Engineer — August 2021 – August 2024
LTIMindtree — *India*
- Architected 3 of 8 Java Spring Boot microservices during a monolith-to-microservices migration for a fraud detection platform, reducing API response latency by **35-45%** and improving fault tolerance across distributed services.
- Engineered a Kafka-based event-driven ingestion pipeline processing **40K–80K XML transactions/day**, implementing idempotent consumers and retry logic to achieve **zero message loss** under peak financial transaction loads.
- Optimized a MongoDB persistence layer with strategic schema design and compound indexing, enforcing ACID compliance for financial data and delivering **sub-100ms read latency** for real-time fraud detection consumers.
- Deployed 4 containerized Java Spring Boot services to AWS EC2, boosting system throughput by **25%** and reducing fraud detection cycle time by **15%** through optimized Kafka stream processing.
- Eliminated N+1 query patterns by refactoring JPA/Hibernate fetch strategies, cutting average SQL query execution time by **˜40%** and improving response times across high-volume transaction workflows.
- Established a full observability stack with Prometheus, Grafana, and SLF4J/Logback structured logging, reducing mean time to resolution (MTTR) by **40%** through automated alerting and distributed tracing.
- Drove unit test coverage from baseline to **86–92%** using JUnit and Mockito, and streamlined Jenkins CI/CD pipelines with Maven automation to achieve a consistently high production release success rate.
- Led end-to-end SDLC ownership across 3+ years of Agile/Scrum sprints, from requirements gathering through production support, collaborating with cross-functional QA and Product teams to deliver on-time Java releases.

Technical Projects

Location-Based Restaurant Recommendation Engine | GitHub
- Built a Java Spring Boot microservices backend with RESTful endpoints and Google Maps API integration, serving real-time geospatial restaurant recommendations with sub-second query response times.
- Exposed an XGBoost classification model via a Java Spring Boot REST API orchestrating multiple third-party data sources, achieving **88% prediction accuracy** for personalized restaurant scoring.

High-Performance Document Retrieval Engine | GitHub
- Developed a distributed search platform using Java Spring Boot and Elasticsearch with optimized inverted index and hash map data structures, enabling full-text search and fuzzy matching across **10K+ documents**.
- Designed a high-throughput REST API layer supporting relevance-ranked query results, tuned for concurrent user loads and low-latency retrieval performance.

YouTube Q&A Platform | GitHub
- Implemented a Java Spring Boot REST API backend integrating a Python LangChain semantic search layer, enabling real-time question answering over YouTube video transcripts via vector embeddings.
- **Achieved 95%+ contextually accurate** responses by orchestrating multi-source retrieval through clean REST contracts between the Java service layer and the LLM inference pipeline.

Skills

Programming Languages: Java, Python, C++, Object-Oriented Programming
Backend & Frameworks: Spring Boot, REST APIs, JUnit, Mockito, Kafka, GraphQL
Databases: MySQL, PostgreSQL, MongoDB, Redis
Cloud & DevOps: AWS (EKS, EC2, S3), Docker, Jenkins, Maven, CI/CD Pipelines, Git, Bitbucket
Certifications: AWS Cloud Quest: Cloud Practitioner – Amazon Web Services