

Nikhila Manogna Renduchintala

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EXPERIENCE

Software Engineer Apprentice

Jun 2024 – Jun 2025

DBS Tech India

Hyderabad, IN

- Led backend integration for 4+ microservices, automating 85% of test data tasks and improving query response times by 25%.
- Enhanced API usability with custom Swagger UI, reducing developer onboarding by 20%.
- Revamped database indexing, boosting overall performance and reliability by 30%.
- Designed and optimized RESTful APIs for high-throughput microservices, ensuring low-latency responses and scalable service communication.

TECHNICAL SKILLS

Languages: Java, Python

Frontend: HTML, CSS, React

Backend: Spring Boot, Flask, Django, RESTful APIs, Microservices, Distributed Systems

DevOps & Databases: Docker, Jenkins, Git, MySQL, MariaDB, PostgreSQL, Redis, Apache Kafka

Core CS: Data Structures, Algorithms, Operating Systems, OOP, DBMS, Computer Networks, System Design

PROJECTS

Distributed URL Shortener System | Java, Spring Boot, Redis, Docker

Mar 2025 - Jun 2025

- Designed and implemented a horizontally scalable URL shortening platform using Spring Boot, Redis, and PostgreSQL, supporting 50K+ shortened URLs and sustaining 1K+ concurrent redirects/sec with p99 latency under 10 ms via Redis caching.
- Implemented rate limiting and analytics pipelines using Redis Lua scripts and atomic counters, reducing database write amplification by 70% while ensuring low-latency, race-condition-free operations under high concurrency.

E-Commerce System | Java, Spring Boot, Docker, Kafka

Jan 2025 – Mar 2025

- Architected a distributed e-commerce backend using Spring Boot microservices and API Gateway, implementing JWT-based authentication and service isolation to enable secure, scalable request routing across 6+ services.
- Engineered an event-driven architecture using Apache Kafka to decouple order, payment, and notification services, and leveraged Redis for caching and in-memory cart storage, improving system scalability, reducing latency, and supporting high-concurrency workloads.

Incident Monitoring & Failure Prediction System | Java, Spring Boot, Kafka, PostgreSQL

Aug 2024 – Oct 2024

- Developed a distributed real-time monitoring platform using Spring Boot and Apache Kafka to process 1K+ system metrics/min, enabling automated anomaly detection and risk scoring.
- Integrated AI-powered failure analysis and root cause summarization with JWT-based RBAC-secured APIs, improving incident resolution efficiency by 35% and ensuring end-to-end auditability across 50+ operational workflows.

Fall Detection via Multimodal Video Classification | Python, Flask, HTML

Jun 2024 – Aug 2024

- Built a web-based application for real-time fall detection using multimodal deep learning models (TimeSformer, ConvNeXT, ResNet-18), fine-tuned on the University of Montreal Fall Detection Dataset.
- Achieved 93.5% accuracy in classifying fall vs. non-fall events and integrated model selection and probabilistic predictions into an intuitive interface for healthcare monitoring.

EDUCATION

Vellore Institute of Technology

Andhra Pradesh, IN

Bachelor of Technology in CSE with specialization in Data Analytics | GPA 9.28 / 10

Aug 2021 – Jul 2025

PUBLICATIONS

Predictive Insights for Enhancing Customer Retention in Banking

Integrating Power BI and Random Forest

Presented at MAI Conference – NIT Patna

- Conducted detailed data pre-processing to optimize model input, including data cleaning, error removal, and feature engineering.
- Developed a customer churn prediction model achieving 97% accuracy using the Random Forest algorithm.
- Created interactive Power BI dashboards to visualize key customer insights and support real-time decision-making.

CERTIFICATES

Artificial Intelligence and Machine Learning Externship , Google Developers

Introduction to Data Analytics , Simplilearn