

SARAVANAN KUMAR

Senior Backend Engineer | 10+ Years | Distributed Systems, Data Platforms & Search

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Bangalore, India | OCI, AI & GenAI Certified

EXECUTIVE SUMMARY

Senior backend engineer with 10+ years delivering production Java platforms at Oracle, Bosch, and WorksApplication. Brings end-to-end ownership across distributed-system architecture, high-volume data ingestion, Kafka, Elasticsearch/OpenSearch, Spark, OCI/Kubernetes, and enterprise workflow automation. Combines technical design, reliable delivery, incident ownership, code reviews, mentoring, and cross-functional leadership.

CORE EXPERTISE

Architecture & Backend: Java 8/11/17, Spring Boot, REST APIs, Microservices, System Design, Event-Driven Architecture, CloudEvents | **Data & Search:** Kafka, Elasticsearch, OpenSearch, Oracle Database, SQL/PLSQL, Apache Spark, OCI Data Flow | **Platform:** OCI, Docker, Kubernetes, Helm, Maven, CI/CD, Git, Grafana, Micrometer | **Applied ML:** Python, FastAPI, XGBoost, Vector Databases

EDUCATION

B.E., Computer Science Engineering - Sri Krishna College of Technology, Coimbatore | 2012-2016

CERTIFICATIONS

Oracle OCI Foundations Associate | Oracle AI Foundations Associate | Oracle GenAI Professional | Oracle Vector DB AI Search

PROFESSIONAL EXPERIENCE

ORACLE INDIA PRIVATE LTD | Bangalore | Sep 2021 - Present

Senior Software Engineer - IC-III | Mar 2024 - Present

Oracle Fusion CRM - OCI Usage Consumption Platform

- Platform technical ownership.** Lead technical design across a seven-service, event-driven G2M/OCI technology-consumption platform. Contribute across Metrics Provider, Indexer, Search, Integration, Extension, Spark Consumption, and Notification POC, with the shared Oracle schema and Extension ML POC.
- High-volume indexing.** Reduced an observed **136M-record** indexing run from about **3 hours to 2.5 hours** by targeting the consumer and OpenSearch indexing bottleneck. Improved a Kafka-Spark-OpenSearch pipeline processing approximately **53M monthly records** and up to 136M rolling-three-month records through multi-pod Kafka consumption and parallel bulk indexing. In six-pod environments, configured up to **24 Kafka consumer threads** and **24 OpenSearch bulk workers**, subject to available Kafka partitions.
- Resilient load orchestration.** Designed monthly and rolling-three-month load orchestration with independent Spark extraction, sequential indexing and safe alias promotion, recovery controls, timestamp-based batch pairing, and safeguards against overlapping or out-of-order daily loads.
- Search, integration, and data foundation.** Built REST APIs for plan details, account-plan views, consumption trends, products, rate cards, saved searches, extension data, and chatbot-facing queries. Maintained supporting Oracle tables, materialized views, packages, audit and history, scheduler objects, reconciliation, and Liquibase deployments.
- Extension workflows.** Built configurable trial-extension capabilities for requests, programs, tiers, approval routing, SPM decisions, approval history, support rewards, administration and integration APIs, spreadsheet loads, OAuth integrations, and Kafka-driven events.
- Production and engineering leadership.** Own CI/CD, containerization, Kubernetes deployment strategy, incident response, and observability. Drive architecture reviews and cross-team delivery, mentor engineers, and conduct code reviews.

Senior Software Engineer - IC-II | Sep 2021 - Feb 2024

- Foundational pipeline.** Designed the initial materialized-view-based extraction and Elasticsearch indexing workflow, then contributed to its Spark-based evolution. Built asynchronous Kafka services and deployed containerized services to OCI-managed Kubernetes clusters.

BGSW (formerly RBEI) | Coimbatore | Jan 2018 - Aug 2021

Senior Software Engineer - Product Development

- HexmodX.** Built automotive firmware console tooling for HEX-file modification, CRC validation, and SHA integrity checks using Java security APIs.
- Supported secure firmware data preparation and integrity validation for embedded automotive systems.
- MDX/MSR workflow.** Built an automotive MDX-to-MSR conversion tool for embedded microcontroller build pipelines.
- Streamlined source-data preparation for firmware builds and received the **SPOT Award** for product-development performance.

PROFESSIONAL EXPERIENCE (CONTINUED) 🏠

WAP (formerly IVTL) | Chennai | Jul 2016 - Dec 2017

Software Engineer - Full Stack

- Developed employee-management workflows in HUE, an enterprise ERP product for Japanese companies, as a Junior Developer using Java 8, Spring MVC, JavaScript, and Elasticsearch.
- Delivered employee-management functionality from business requirements through implementation using Java 8, Spring MVC, and JavaScript.
- Implemented Elasticsearch-backed employee search and maintained changes through Git-based development.

SELECTED INNOVATION 🔗

Extension Decision Recommendation POC | 2025 - Present

Technology focus | Python, FastAPI, XGBoost, Probability Calibration, Drift Monitoring

- Contributed to a Python/FastAPI ML service that uses XGBoost, probability calibration, precision-based thresholds, drift monitoring, audit records, and human-review guardrails to recommend active trial plans and permitted extension options for SPM decision workflows.
- Contributed recommendation-review, cancellation, workflow-invocation, and callback APIs that preserve an auditable human-review path for extension decisions.

GenAI Chatbot - URL and Opportunity Creation | Aug 2024 - Nov 2024

Technology focus | BlenderBot, Vector Database, JavaScript, Spring Boot REST APIs

- Led a conversational-AI POC integrating BlenderBot and vector retrieval for sales-rep intent recognition. Implemented JavaScript workflow UI and REST APIs in the Search Service for chatbot-guided URL and opportunity creation.
- Connected the model to a vector database for intent retrieval and validation checks, with workflow-aware plan-status verification in the Search Service.

AWARDS 🏆

- **STAR Performer - Oracle.** Recognized for delivering a critical feature ahead of schedule.
- **SPOT Award - Bosch.** Recognized for outstanding product-development performance.