

Joel Jaison

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PROFESSIONAL SUMMARY

Software Engineer specializing in Generative AI and agentic systems. Builds production multi-agent workflows, RAG pipelines, and backend services (Python, FastAPI) on cloud infrastructure (AWS, OpenShift).

EDUCATION

Sahrdaya College of Engineering & Technology

Kerala, India

B.Tech, Computer Science Engineering; CGPA: 7.6/10

2021 – 2025

Don Bosco HSS

Irinjalakuda, India

Higher Secondary (Computer Science); 97.5%

2019 – 2021

PROFESSIONAL EXPERIENCE

Software Developer

Jul 2025 – Present

IBM

Kochi, India

- Modernized observability for **Watsonx Orchestrate**, leading the migration of distributed tracing from **Jaeger** to **Langfuse** with external **ClickHouse** collectors, and built the APIs that expose those traces for real-time agent governance and monitoring.
- Eliminated manual regression-testing effort for **Watsonx Orchestrate**, automating **200+** test cases with a **Pytest/Playwright** framework wired into **Jenkins**, **GitHub**, and **TestRail**, with watsonx-driven failure analysis auto-filing and validating defects in under **30 seconds**, down from a manual triage process.
- Hardened **Watsonx Orchestrate**'s control plane by building content, output-length, secret-detection, and SQL-sanitization guardrails that plug into every agent type (**LangGraph**, **A2A**) and tool type (Python, Langflow, OpenAPI, MCP), shipped as **FastAPI** services on **OpenShift** with **Jenkins** CI/CD for consistent governance out of the box.
- Extended **Watsonx Orchestrate**'s RAG pipeline by building **Milvus**-based ingestion connectors for external data sources, widening the range of data agents can reliably retrieve from.

Software Developer Intern

Jan 2025 – Jul 2025

IBM

Kochi, India

- Built the data-fetching pipeline connecting **Db2** to **watsonx.data**, giving the platform a direct, reliable path to pull enterprise data for downstream UI and APIs.
- Shipped new **watsonx.data** UI features end-to-end using **React** and **IBM's Carbon Design System**, from spec to production release.
- Owned the watsonx.data frontend's migration from **React 17** to **React 19**, adopting the new ref-as-prop pattern and retiring deprecated APIs to keep the codebase current.

Alexa Skill Developer (Intern)

May 2023 – Jun 2023

Inclusys Org Foundation

Remote

- Built Alexa Skills for elderly memory exercises and conversational prompts, raising engagement by **30%**.
- Deployed voice services on **AWS Lambda**, maintaining **99%** uptime.

KEY PROJECTS

LawLens AI: Compliance Assistant | *RAG, Mistral-7B, ChromaDB, LangChain*

GitHub

- AI-powered compliance assistant using RAG + Mistral-7B; retrieval via ChromaDB; **96%** rule-match accuracy; **1st Prize at BeachHack**.

KeyPilot: Semantic API Gateway | *Node.js, RedisVL, Redis Streams*

GitHub

- GenAI API gateway for semantic routing, caching and vector retrieval; event-driven architecture with Redis Streams.

Livie: AI Storytelling Assistant | *Watsonx, Mistral-7B, Spring Boot, AWS*

GitHub

- Elderly wellness companion using fine-tuned Mistral-7B; deployed microservices on AWS; **1st Runner-Up at IBM GenAI Conclave 2024**.

TECHNICAL SKILLS

Generative AI & Agentic Systems: LangChain, LangGraph, RAG Pipelines, MCP (Model Context Protocol), A2A Protocol, Langflow, LLM Guardrails, LLM Benchmarking, Milvus, ChromaDB, Watsonx.ai, Watsonx Orchestrate, Watsonx.data

Languages: Python, Java, TypeScript, Rust, SQL

Backend & APIs: FastAPI, Node.js, Spring Boot, PostgreSQL, MongoDB, Redis, Db2

Cloud & DevOps: AWS (Lambda, S3), Azure, OpenShift (OCP), Docker, Kubernetes, GitHub Actions, OnePipeline

Testing & Observability: Pytest, Playwright, Jenkins, TestRail, Jaeger, Langfuse, ClickHouse

Other Tooling: Hugging Face, MLflow, Ollama, TensorFlow, PyTorch, React, Next.js