

# HIMANSHU BALIYAN

Software Engineer — Backend & AI Systems  
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## SUMMARY

Software engineer with 1 year of experience building production backend services in Java and Spring Boot and shipping LLM-powered features including RAG pipelines and agentic workflows.

## EXPERIENCE

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| <b>Software Engineering Intern</b><br><i>Airtel Digital</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Jan 2025 – Jan 2026<br><i>Gurugram, India</i> |
| <ul style="list-style-type: none"><li><b>Incident Diagnosis &amp; Monitoring:</b> Instrumented 8 microservices with Prometheus, Grafana, Loki, Tempo and OpenTelemetry, establishing system-wide tracing and reducing Mean Time to Diagnose (MTTD) production incidents by ~40% across a 90% monitoring baseline.</li><li><b>Performance Tuning &amp; Issue Resolution:</b> Led debugging and root-cause analysis across 25+ REST endpoints and PostgreSQL databases, optimising slow SQL queries to cut p95 response times from ~850 ms to ~300 ms under peak traffic.</li><li><b>System Stability &amp; Fault Recovery:</b> Maintained distributed Apache Spark and Kafka ingestion pipelines processing ~12M telemetry events daily, implementing checkpointing and automated recovery mechanisms to sustain 99.5% pipeline uptime.</li><li><b>Operational AI Tooling:</b> Built and supported internal AI-driven retrieval workflows using Python, LangChain and RAG architectures, reducing cross-team document investigation time from ~2 hours to under 5 minutes per request.</li><li><b>Release Reliability:</b> Automated containerised CI/CD deployment pipelines across Docker and Kubernetes, reducing release cycles from 45 to under 10 minutes while decreasing production deployment failure rates by 60%.</li><li><b>Cross-Functional Team Support:</b> Acted as primary technical support for 4 internal analytics teams, troubleshooting service integration issues, maintaining technical documentation and maintaining backend microservices.</li></ul> |                                               |

## SKILLS

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| <b>Languages &amp; Core</b>            | Python, SQL, Java, Bash, JavaScript                                                                                   |
| <b>Observability &amp; Support</b>     | Root Cause Analysis (RCA), Log Analysis, Incident Remediation, Prometheus, Grafana, Loki, Tempo, OpenTelemetry        |
| <b>AI &amp; Architecture</b>           | Generative AI, RAG Pipelines, Agentic Workflows, LangChain, LangGraph, Vector Search, AI & Data Solution Architecture |
| <b>Data &amp; Cloud Infrastructure</b> | PostgreSQL, Docker, Kubernetes, Apache Kafka, Apache Spark, CI/CD, Linux, AWS                                         |

## PROJECTS

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| <b>AegisFlow — AI Agent Orchestration &amp; Sandboxing</b>   <i>Node.js, Docker, Kafka, ClickHouse</i><br>Architected a stateful orchestration layer for AI coding agents, implementing local execution guardrails and evidence journaling to safely manage multi-step codebase modifications. Engineered an isolated testing pipeline using Docker, enabling AI agents to safely compile and validate generated code within sandboxed environments. Designed an event-driven telemetry system utilising Kafka and ClickHouse to ingest and monitor real-time agent execution states and token utilisation. |
| <b>Air Clear — Air-Quality Outlook for Schools</b>   <i>Python, Airflow, FastAPI, TimescaleDB, React</i><br>Built and run a live service ( <a href="https://air.himanshubaliyan.dev">air.himanshubaliyan.dev</a> ) that grades outdoor-practice conditions for about 80 Delhi NCR monitoring stations up to five days ahead: 9 Airflow DAGs ingest hourly OpenAQ, CPCB and ERA5 data into TimescaleDB, and a FastAPI service feeds a React dashboard, with 230+ tests in CI. Backtested gradient-boosted models against a statistical baseline and shipped the better-calibrated rule.                      |

## EDUCATION

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| <b>Master of Computer Applications — CGPA 8.4</b><br><i>Hindustan University</i> | Sep 2022 – Sep 2024<br><i>Chennai, India</i> |
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