

BHUSHAN DHAPODKAR

AI Engineer | Backend Engineer — Fintech & Generative AI Systems

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PROFESSIONAL SUMMARY

AI & Backend Engineer with 7+ years building production-grade fintech systems and Generative AI solutions. Proven track record shipping end-to-end RAG-adjacent tooling, AI agents, and MCP-based automation that cut operational errors and accelerate engineering velocity 5-10x. Deep expertise in Java/Spring Boot microservices, multi-agent orchestration (LangGraph, Google ADK, MCP), rule-engine design, and secure, high-scale payment infrastructure spanning 100+ global banking partners.

SKILLS

Generative AI & Agents: RAG Pipelines, AI Agents, Multi-Agent Orchestration, LangChain, LangGraph, Google ADK, Model Context Protocol (MCP), Prompt Engineering, Spring AI, LLM Integration (OpenAI, Claude), Pinecone (Vector DB)

Backend & Architecture: Java 8/21, Spring Boot 2.x/3.x, Microservices, REST APIs, Apache Camel 2.x/4.x, Hibernate, JPA, System Design, Rule Engines, Multithreading & Concurrency

Data, Messaging & Automation: PostgreSQL, MongoDB, Redis, Kafka, RabbitMQ, Amazon SQS, n8n

Cloud, DevOps & Tools: AWS, Azure, Kubernetes, CI/CD, JUnit 4/5, Data Structures & Algorithms, Security Engineering

PROFESSIONAL EXPERIENCE

SDE-III — Nium *June 2022 – Present*

- Own end-to-end payment infrastructure — Payin, Payout, Virtual Account Numbers (VAN), Statements, and Reconciliation & Retry — across a multi-country, multi-currency environment including SEPA cross-border corridors.
- Design and ship AI-powered internal tooling and automation (see Projects); mentor junior engineers on coding standards, system design, and AI-assisted development practices.
- Drive system-design decisions for AI-enabled payment tooling — evaluating architecture tradeoffs across LLM selection, agent orchestration patterns, and MCP integration — for production reliability, security, and cost efficiency.
- Act as the go-to senior engineer for GenAI adoption within the team, setting best practices for LLM integration (OpenAI, Claude), prompt design, and AI-assisted development, and driving their rollout across other engineering initiatives.

SDE-II — Accion Labs

Sept 2021 – June 2022

- Entity Verification System:** Led development of a system enabling banks to securely verify customer identity via PAN, Aadhar, Passport, and Voter ID, improving KYC efficiency.
- Full-Stack Delivery:** Built backend services in Spring Boot/Java 8 across card payments, gaming, trading, and travel domains, working with MongoDB, Graph DB, Redis, and Azure as a full-stack developer.

Software Engineer — TCS

July 2019 – Sept 2021

- Developed and maintained backend services for enterprise applications using Java, Spring Boot, and SQL, ensuring high scalability, performance, and reliability.

Software Engineer Intern — Indian Space Research Organisation (ISRO) *July 2018 – March 2019*

- Optimized satellite image processing pipelines using Python (NumPy, Pandas) parallel-processing techniques, cutting processing time from 16 minutes to 7 minutes.

PROJECTS

Balance Manager — Treasury Automation *(Nium)*

- Designed and built an automated fund-management system for 100+ bank accounts, replacing a manual treasury process that caused ~7% of transactions to fail on balance errors. Built a rule engine that auto-selects the source account, transfer amount, and lowest-fee route across the top 10 currency corridors (e.g., EUR) whenever a balance drops below threshold — pitched, owned, and shipped end-to-end.

RCA Tool — MCP-based Debugging *(Nium)*

- Built a Root Cause Analysis tool as an MCP server with direct access to Jira, production databases, and the codebase, enabling engineers to trace and resolve production issues from logs alone, sharply cutting investigation time.
- Given only application logs, the tool autonomously identifies the root cause of an issue and recommends a concrete fix — removing the need for manual log tracing across systems.

Partner Downtime Management UI *(Nium)*

- Designed and shipped Nium's first production automation on n8n — a self-service UI for Tech Support to schedule, pause, and resume downtime across 100+ global payment partners, eliminating manual night/weekend engineering intervention and improving audit visibility. Owned the project end-to-end, including security approvals.

Java Platform Modernization (Java 8 → 21) *(Nium)*

- Led an LLM-assisted upgrade of a production payment platform from Java 8 to Java 21 (Spring Boot 2→3, Apache Camel 2→4, JUnit 4→5, RabbitMQ → SQS, resilience & messaging modernization, 30+ dependency upgrades), compressing a typical 10-15 day migration into 2 days.

TechSupport Agent — RAG-based Support Assistant *(Nium)*

- Built a RAG-based agent, backed by a Pinecone vector store of curated support content, that retrieves and generates solutions for common operational issues — enabling Tech Support to resolve them independently without escalating to the core engineering team. Included a data-cleaning pipeline to keep the knowledge base accurate and up to date.

AI Stock-Impact Agent *(Self, built on Google ADK)*

- Built an agent that ingests real-time news/market events (e.g., a commodity price move) and produces an automated report on which stocks are impacted, with a 1-month directional forecast.

ACHIEVEMENTS

DSA Animator *(Personal Project)*

- Built and launched a side project visualizing data structures & algorithms; grown organically to 10,000+ users.

VBS App *(Personal Project)*

- Reached 100,000+ registered users within 1 year; won the Best Start-Up Award at Start Up Mela, 2018.

Reels Manager *(Personal Project)*

- Cross-platform app (Flutter + Java/Spring Boot backend) published on Play Store, built with 95% AI-generated code.

EDUCATION

Bachelor of Engineering in Information Technology

St. Vincent Pallotti College of Engineering, Nagpur | July 2015 – June 2019